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Original Articles.

THE TREATMENT OF DIABETES.*

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IT is customary to emphasize the importance of the subject of the treatment of diabetes by calling attention to the increase of diabetes among civilized peoples. Magnus-Levy[1] gives German hospital statistics showing that in thirty years the total number of patients increased 3.3 times, and the number of diabetic patients increased 19 times. Not merely the number of cases, but also the number of deaths has increased. The statistics for the registration area of the United States show, from 1901 to 1905, an annual average of 3772 deaths from diabetes, and a steady subsequent increase, so that in 1912 the deaths from diabetes were 9045. Authorities are practically unanimous in the opinion that improved diagnosis is not enough to account for this increase, that is, the increase is real and not merely apparent. Moreover, as Magnus-Levy points out, mortality figures fail to show the true incidence of diabetes. The majority of diabetics are elderly persons, and these often die of some cause other than the diabetes itself. Even among younger persons many deaths are recorded under tuberculosis and other infections, when the important predisposing cause was diabetes. Accordingly, the situation is that present prophylactic methods have not prevented an increased incidence of diabetes, and present therapeutic methods have not prevented an increased death-rate.

Rollo, an English army surgeon, in 1796 inaugurated modern diabetic therapy by limiting patients to animal food. Bouchardat and Cantani restricted the harmful excess of protein, and employed green vegetables. Naunyn has wielded a powerful influence in favor of the restriction of protein, and also occasional fast-days. His life has extended from the pioneer period to the present, and he deserves to be honored as the foremost clinician in the history of diabetes, whose methods and ideas have stood the test of time better than any others. Stadelmann, a pupil of Naunyn, in 1883 founded the theory of acid-poisoning as the cause of diabetic coma, and inaugurated the alkali treatment. Van Noorden in 1903 introduced the so-called "oat-cure." Various workers have elaborated these methods in various details, but essentially they constitute the present treatment of diabetes, and are the only measures that have shown any therapeutic value. No text-book or reliable treatise on diabetes claims that every case can be checked. On the contrary, all authorities describe a considerable class of cases that are past hope, and all agree in giving such patients carbohydrate for the sake of diminishing acidosis.

Special mention may be made here of treatments which have involved fasting. Naunyn's use of occasional single fast-days was to clear up a resistant glycosuria, to improve tolerance, and to ward off coma. Van Noorden makes use of the increased tolerance resulting from fast-days or vegetable days as a preparation for his oatmeal treatment. He also now follows Naunyn's plan of one or two fast-days to prevent coma, and he describes the immediate rapid fall of aci-

* Read at a meeting of the Suffolk District Medical Society in connection with the Boston Medical Library, December 2, 1914.

dosis thus produced. In a correct and forcible metaphor, he speaks of these days as "metabolic Sundays." He states that the benefit of these days is such that he can generally make the patient gain weight in the few days immediately following. This custom of forcing the patients to gain weight may prove to be a mistake which he and others make in the treatment of severe diabetes. Another form of using fast-days is the method introduced by Guelpa[2] of Paris. He believes that diabetes is an auto-intoxication. His treatment is a fast of three days or more, with a bottle of hot Hunyadi-Janos water each day, followed by first a milk, and then a vegetable diet, with occasional repetition of the fasting and purgation. It would be easy to aim ridicule at Guelpa, as those who read his original work will perceive. But it is better to emphasize the serious fact that Guelpa has used a rigorous fasting treatment for diabetes, and has demonstrated real benefit from it in some cases. On the other hand, his theories are grotesque, his excessive purging is an unnecessary inconvenience, and his milk and vegetable diet precludes success in any but mild cases. A search of his list of so-called cures shows that there is not a severe case among them. The rather startling character of Guelpa's treatment, and his exaggerated claims and active propaganda for it, have roused some interest among physicians and laymen in various parts of the world. Some quacks and nostrum-makers have taken their cue from him, and recommend fasting and purgation. Authorities on diabetes have ignored his treatment, because it is so far inferior to the ordinary rational methods. But, though the other features are erroneous, the benefit of the fasting deserves to be recognized.

There is considerable confusion regarding diabetes and glycosuria, and some physicians distinguish alimentary glycosuria, nervous glycosuria, gouty, hepatic, or other forms of glycosuria, as entities distinct from diabetes. Renal glycosuria is perhaps a rare genuine condition. There is no better rule than that made by Joslin[3]: "I consider any patient to have diabetes mellitus and treat him as such, who has sugar in the urine demonstrable by any of the common tests. This is a broad definition, but is safer for the patient than the use of the term glycosuria, which begets indifference." There are a few patients who, because of advanced age or other special reasons, need little or no treatment for their diabetes, and the main object is to keep them comfortable. My remarks throughout this paper are meant to apply only to that great majority of diabetics who are unquestionably in need of treatment.

It is impossible here to go into details of the theoretical and experimental side of diabetes, which I have reviewed elsewhere.[4] To assist clearness, one statement may be made concerning the doctrines of the Vienna school, which has upheld especially two interrelated theories. One is that diabetes is nothing but an increased production of sugar, without loss of the power to utilize sugar. The other is the polyglandular or pluriglandular doctrine, which represents diabetes as a loss of balance between antagonistic glands; in particular, the chromaffin system, as a stimulator of sugar production is supposed to be resisted by the pancreas, as an inhibitor of sugar production. The one statement to make concerning both these doctrines is that they have never been supported by facts; and it would not be necessary to mention them here except for the over-zealous manner in which they have been promulgated among the medical profession. Certainly the great mass of evidence and the great majority of investigators favor the view that in diabetes there is a loss of power to utilize sugar, not a mere acceleration of sugar formation. Also, the internal function of the pancreas is somehow to make possible the utilization of sugar by the tissues. There is no valid proof in the entire literature to show that the adrenals oppose this function of the pancreas, or that the pancreas inhibits sugar formation or opposes the adrenals in any way. Most of those here are familiar with the work of Cannon, who has shown how states of strong emotion are attended by splanchnic stimulation, adrenalin discharge, and hyperglycemia, and has suggested the explanation that this mechanism provides increased sugar for the muscular activity naturally associated with such emotions. I cannot forbear mentioning how unthinkable such a mechanism would be, if the adrenal stimulation and adrenalin discharge opposed the utilization of the sugar by the tissues. It will conduce to clearness if people will dismiss from their minds those diagrams showing imaginary lines running between pancreas, adrenals, liver, thyroid, etc.

The best established and most generally accepted theory is that diabetes results from deficiency of the internal secretion of the pancreas. In a relatively small number of cases there is gross destruction of pancreatic tissue by infection or otherwise, and here early surgical intervention, in the form of drainage of the gall-bladder or other suitable measures, is presumably the most important treatment. In the great majority of cases the gross appearance of the pancreas is normal. Changes in the islands of Langerhans occur in animals with experimental diabetes, and changes in the islands of human patients are being found more frequently as they are sought more carefully. Even after the longest and severest clinical diabetes, changes in the islands may be difficult to discover, and complete destruction of all the islands in the human pancreas must be a great rarity, if it ever occurs. In animals the islet changes are secondary to the diabetes. In human cases it is still unknown to what extent the changes are primary, producing the diabetes, or to what extent they may be secondary, produced by the diabetes. It seems that a considerable functional factor is generally present; that we are never dealing entirely with destruction of tissue which cannot be replaced, but always with a certain element of disturbed

function, which can be broken down by overstrain or strengthened by rest. On the other hand, a full return to normal function is practically never obtainable.

Macleod,[5] in the opening of his book, gives a simple objective description of diabetes. He states how it appears at first as a weakened function of carbohydrate metabolism, next there is a weakened function of protein metabolism, and then in the severe cases an imperfect metabolism of fat. If we follow this plain, simple idea, it guides us to a rational therapy. Diabetes is commonly looked upon as a progressive, fatal disease. Of course in one sense it is a disease. But in another sense, it may be beneficial to implant the idea in both physicians and patients that diabetes is *not a disease*. There is no evidence that it is an infection, or an auto-intoxication, or anything else of that order. So far as I am aware, an inherent downward tendency has never yet been demonstrated in typical cases. For practical purposes we may well keep to the simple idea mentioned above, that diabetes is merely the weakness of a bodily function, namely the function of assimilating certain foods. It may be compared with indigestion. A weak stomach* may never become a strong stomach, but there is no cause for death unless the patient abuses the weak organ. The possibility and perhaps the probability exists that a weak pancreas is something analogous. Every person has his weak point, and ultimately breaks down at some one point, rather than everywhere simultaneously. If diabetes is a weakness of the pancreatic function, we can understand why the breakdown is most frequent in elderly persons, but generally most serious in young persons. This idea began with Naunyn. If a person overtaxes a weak stomach, the resulting distress punishes the error and forces him to desist. If he overtaxes a weak pancreas, nothing but intelligence can show him what is wrong. If there were no prompt reflex mechanism to prevent and punish overtaxing the digestive function, doubtless the death-rate from indigestion would be fully as high as the death-rate from diabetes now is, and indigestion might appear as a progressive fatal disease, for which all sorts of explanations and all sorts of remedies would be offered. Many a dyspeptic sits at table and longs for pleasant-tasting food, but dares not eat it because of the immediate penalty. Many a diabetic sits at table and longs for certain food, and perhaps eats it, even though he knows better. This is merely an illustration that the lower nerve centers are often more effective in controlling conduct than the higher centers. But if the conception is correct, of diabetes as the simple weakness of a bodily function without inherent downward tendency, then if the patient is obedient he may be kept from going down-hill simply by preventing him from overtaxing his weakened function. The weak pancreas may never become a strong pancreas. The patient may never be entirely normal again. But if our idea is fully correct, this precaution may save life.

The form of treatment embodying this idea was first worked out on animals, and has been described briefly elsewhere.[6] When about nine-tenths of a dog's pancreas is removed, the resulting condition may appear as a progressive fatal disease. But obviously we have produced not a disease, but merely the weakness of a certain function. If we try to keep the dog fat, and satisfy his large appetite, he goes steadily down-hill for several months, and dies in extreme cachexia. But we can stop glycosuria by fasting, and can then place the animal on a low diet which will support life without producing glycosuria. Such an animal is thin, but strong and lively, with no cachexia and no sign of downward tendency. The treatment for patients is similar. The first step is to fast till glycosuria ceases, and then for twenty-four or forty-eight hours longer. At the same time, the ketonuria falls steeply. It quickly approximates what a normal individual would show under similar conditions, and the aim is to keep it constantly down to this level. Plain fasting suffices for the purpose; but since alcohol is a food which does not produce glycosuria and is said to diminish ketonuria,[7] it is generally given during fasting, especially if there is danger of coma. Its use or omission in later treatment depends upon individual conditions. Alkalies may be useful for the first few days if coma seems imminent, but are then no longer needed. Continuing the sodium bicarbonate may cause the ferric chloride reaction to remain positive longer than it otherwise would, with no benefit to the patient as far as I have seen.

When the fasting patient has been free from glycosuria for twenty-four to forty-eight hours, the next step is to begin feeding very slowly and cautiously. There need not be a fixed program. It is desirable to individualize the diet to suit the needs of different patients, and various physicians may have personal preferences of their own. The one requirement is that the patient must remain free from both glycosuria and acidosis. Any trace of sugar is the signal for a fast-day, with or without alcohol. The original fast, to clear up the urine in the first place, may be anything from two to ten days, but after that no fast need be longer than one day. The things to be considered in the diet are carbohydrate, protein, fat, and bulk. Frequently the first thing given after the fast is carbohydrate. No distinction is necessary between different forms of starch, but there are advantages in using vegetables, following Joslin's convenient classification on the basis of carbohydrate content.[8] The first day after fasting, the only food may be 200 grams of vegetables of the five and six per cent. classes. This is increased day by day until a trace of glycosuria appears, which is checked by a fast-day. The purpose of such a program is to learn the carbohydrate tolerance and to clear up the last traces of acidosis. After this carbohydrate

* This term is of course meant only in the usual colloquial sense, to signify the digestive function.

period, or sometimes in place of it, protein is given. On the first day perhaps one or two eggs are given, and nothing else. More protein, generally as eggs and meat, is added day by day, until the patient either shows glycosuria or reaches a safe protein ration. The purpose here is to learn the protein tolerance, and to cover protein loss as quickly as possible. Fat is somewhat less urgently needed, except in very weak and emaciated patients, and it can be added gradually, as conditions seem to indicate. An element of bulk in the diet is necessary to give the comfortable feeling of fulness, and to prevent constipation. This is the great advantage of green vegetables. When they are fed raw, or cooked in steam, or boiled and evaporated so that no water is thrown away, they contain a definite quantity of carbohydrate, besides valuable salts; and this is the only form of carbohydrate that patients thus treated ordinarily receive. Some cases are so severe that even green vegetables cannot be tolerated. A little girl now in the hospital showed glycosuria when she was given nothing but 100 grams of celery and lettuce distributed through the day. Under these conditions the vegetables may be boiled through three waters, throwing away all the water. Nearly all starch is thus removed, and the most severe cases generally take these thrice-cooked vegetables gladly and without glycosuria.

One result of the initial program here described is the loss of weight. This is the thing which physicans have been accustomed to dread most but which, according to present indications, is beneficial in itself. In subsequent treatment, the patient is welcome to gain weight up to a certain point, provided he can do so without glycosuria or acidosis. The attempt to put on weight, according to the time-honored traditions of diabetic treatment, is one of the surest ways of bringing back all the symptoms and sending the patient down-hill. It is probably one of the chief causes of past failures in treating severe diabetes. In the severe cases it is found necessary to restrict all classes of food, and to test the tolerance of each patient for each particular class. Carbohydrate is given if possible, but is kept safely below the limit of tolerance. Protein must be kept fairly low, sometimes very low. With a dangerously low protein tolerance the working rule has been to exclude all carbohydrate, then feed as much protein as is possible without glycosuria. Experience thus far seems to indicate that every patient can tolerate his necessary minimum, and that glycosuria appears only when this indispensable minimum is exceeded; but a longer series of analyses will be necessary before asserting this as a fact. Fat has heretofore been considered as both safe and necessary in the diabetic diet. I realize the risk of disputing this doctrine, but must state the observation that patients may show a fat tolerance as truly as a carbohydrate or a protein tolerance. I have never seen glycosuria from fat alone; but there are patients whose urine is constantly negative on a given diet, who will show both glycosuria and ketonuria if butter or olive oil is added to that diet. The very severe diabetic may be both thin and weak, because he cannot metabolize enough food to be strong or well-nourished. But as long as his weakened function is not overtaxed, he seems able to retain such weight and strength as he has, at least for a considerable period. Any attempt to build him up with any kind or quantity of food beyond what he is able to metabolize perfectly, apparently hastens a fatal result.

The number of diabetics admitted to the Rockefeller Hospital has been twenty-seven. The majority were admitted only during the past month, therefore are still in the Hospital. The longest treatment and observation of any one patient has been nine months. The number of applications has considerably exceeded the accommodations, therefore selection has been possible. No very severe case has yet been rejected, and the policy has been to choose the worst cases of diabetes that could be found. Lately a few earlier or milder cases have been admitted, in order to learn what can be done with such patients. The youngest patient is aged ten. The oldest is a woman of sixty-nine, with incipient gangrene. Every patient treated has been made free from both glycosuria and acidosis. The number of deaths has been three. Of these two were untreated cases; viz., one man who entered the hospital in coma and died within three hours, receiving no treatment except an intravenous bicarbonate injection; and one woman who entered with acute heart failure and hemoptysis, and died on the fifth day, apparently from her cardiac lesion. The one treated patient who died was a twelve year old boy, who had had diabetes for seven years, the long duration being perhaps partly explained by the excellent care he had received. The emaciation was extreme; there had been albuminuria with casts for several months; he was almost totally blind with diabetic retinitis; he had been in partial coma on several occasions, and coma had been feared for several days before he entered the hospital. This boy became free from glycosuria and acidosis, and showed very satisfactory improvement for two and one-half months. He was taking a diet of sufficient quantity, and had acquired a tolerance of twenty grams of carbohydrate. He seemed to coöperate very cheerfully in the treatment as long as the fear of death was upon him, but as soon as he imagined himself out of danger, he showed surprising ingenuity in stealing food. Several such adventures caused him to lose ground seriously, and he died in a rather sudden and unexplained fashion, with urine still sugar-free, four months after entering the hospital. The essential cause of death was his extreme weakness. Accordingly, up to the present, the record is that no patient has died who has followed treatment. Deaths are to be expected, however, if we continue to accept the most extreme cases; and there

is no desire to pretend that this treatment can save all patients.

The graphic charts shown here represent the records of four patients. These charts and analyses are made by or under the supervision of Miss Mary B. Wishart, as chemist.

The first chart is that of a man aged 34, with moderately severe diabetes of one year's standing. He originally weighed 175 or 180 pounds, without obesity, and he had lost fifty pounds. There was considerable glycosuria on ordinary strict diet; in two days' test on admission the output was 32 to 61 grams. There was a positive ferric chloride reaction, but no clinical symptoms of acidosis; and as we were busy with more severe cases, no quantitative determinations were done except for sugar. Four days of fasting were required before the urine was sugar-free. That is one indication that the diabetes was not very mild. Ketonuria ceased as usual. The diet was gradually increased, and the improvement was satisfactory. Then an experiment was started with quantitative determinations, and the chart shows how both glycosuria and ketonuria returned when fat was added to the diet. As this was a fairly mild case, an enormous quantity of fat was necessary to produce this result—more fat than the average patient could eat. Everything then cleared up promptly under treatment. He gained weight and was dismissed to resume his ordinary work, on adequate diet, but with orders to keep himself at least fifteen pounds below his previous weight.

The second case is a little more severe. The patient was an Italian tenement-house girl, seventeen years old, with diabetes of eighteen months' standing. One year ago she spent seven weeks in Mt. Sinai Hospital. The diabetes was not stopped, and she was dismissed, taking sodium bicarbonate and a limited quantity of bread. Before the diabetes she was slightly obese, weighing 120 pounds. Her weight when we received her was 92 pounds. On ordinary strict diet her urine showed 78 grams sugar, 11.7 grams acetone bodies as B. oxybutyric acid, and 3.1 grams ammonia, on 20 grams of sodium bicarbonate daily. She cleared up in the usual way and progressed satisfactorily. Her symptoms were reproduced by adding chiefly fat to the diet, and were cleared up again by the usual treatment. She was dismissed to go to work, on adequate diet, with urine normal, feeling perfectly well. She was not allowed to gain weight, and was ordered not to gain weight after leaving.

The third patient is a man aged twenty-nine, with diabetes of eighteen months' standing and unusual severity. He was thin and slight at his original weight of 145 to 150 pounds, and he entered the hospital weighing 110 pounds. He had been in the best of hands, but was never sugar-free from the outset. He was sent to us from the Presbyterian Hospital, where he had been for ten days in a dangerous condition. They had found the D:N ratio of the totally depancreatized dog, viz, about 2.8 to 1. We confirmed this in a four days' test on carbohydrate-free diet. During this time he was shooting downward with remarkable rapidity. While eating to his utmost capacity, he lost about a kilogram of weight per day, with a negative nitrogen balance of from 12 to 16 grams per day. Sugar excretion was 58 to 65 grams, acetone bodies 20 to 39 grams, ammonia 2.88 to 4.25 grams. Treatment had to be begun because he was going into coma. The chart shows the subsequent progress, during his four months in the hospital. So far, this record is the most unsatisfactory one we have, and I show it for that reason. There is no ketonuria, but the occasional slight glycosuria is bad, and is only partly explained by intentional dietary tests. There is no immediate danger, and the patient feels much better and more comfortable in every way than before treatment. He can be up and dressed all day, and can take a little exercise or go to the theatre. But he is thin and weak, unfit for work, and still in need of hospital care. His future is doubtful.

The fourth patient is the most severe we have had. He was a strong, healthy Irish boy, aged seventeen years, apparently absolutely normal until the sudden onset of diabetes ten months ago. He had chiefly dispensary treatment, and was twenty-five days in Bellevue Hospital last June, but the diabetes was never stopped. His normal weight was 133 pounds. He came to us weighing 91 pounds. He had just had a severe gastro-intestinal upset with weakness such that he was expected to die, and came to the hospital as soon as he was able to leave bed. His blood-pressure was 85 systolic, 75 diastolic. He was sent to Bellevue Hospital for calorimeter tests by Dr. DuBois in connection with the treatment, and has remained there up to the present time. I am indebted to Dr. DuBois for all the records and analyses except those of the acetone bodies. The preliminary tests were cut short because coma seemed imminent. The most interesting data are that on Nov. 11 he received no food except 50 c.c. cream early in the morning, and subtracting the carbohydrate of the cream, the D/N quotient on this day was 3.69.[9] The blood-sugar on this day was 0.3%. The respiratory quotient was 0.697, indicating the combustion of little or no carbohydrate. The chart shows the subsequent history to date. It is noteworthy that the blood-sugar has declined, but has never yet reached normal. This is the only case, among several tested, in which the blood-sugar has not fallen promptly to normal. The diet now consists of meat, eggs, butter, olive oil, whiskey, and thrice-cooked vegetables, representing a maximum of 9.77 grams nitrogen and 1991 calories daily. A trace of glycosuria appeared on this maximum diet, which has therefore been slightly reduced. The patient is subjectively improved. The respiratory quotient indicates that the protein sugar is now burned. The marked gain in weight is essentially water-storage, which perhaps represents partly a normal recovery of water by the previously dried tissues, and perhaps partly an invisible edema.

These cases afford a general idea of the methods and results of this treatment. There seems evidence that it clears up certain cases which heretofore have not been cleared up, and that the cases which could be cleared up heretofore are cleared up more quickly by this method. Of course it is not a "cure" of diabetes; and essentially the new feature in it is that, upon the information gained from animal experiments, it attempts to do the same things that the rational treatment has attempted previously, but to do them more quickly and accurately and thorough-

ly. The immediate results are what we can state. The permanent results are yet to be demonstrated, and they are the most important. As friends here in Boston have told me, what they wish will be to know, one year, two years, and at longer periods hereafter, how many of these patients are dead, how many are free from glycosuria and other symptoms, how many are fit for work or play, and so forth. These are in fact just and decisive questions. The answer to them will be governed by two factors, one of which may be called the scientifie factor, and the other the human factor. It is worth while to discuss these two factors, to give some idea of the hopes and possibilities.

The scientific factor has to do with the theoretical value of this treatment under ideal conditions. What are its powers and its limitations, provided it is perfectly carried out? It seems possble that it may offer the hope of abolishing, in diabetes, all those things which have traditionally been considered as practically synonymous with diabetes. It gives the vision of a diabetes in which there is no glycosuria, no acidosis, no use for alkalies or other drugs, no complications, no gangrene, no downward progress, no coma, no death. That is the ideal which I venture to put into words, without knowing whether the future will justify it or not. The vital question must be decided: Is there or is there not an inherent downward tendency in diabetes? The answers of the past are not conclusive, because there has been too much overfeeding with carbohydrate-free diet. If the pancreatic function is spared by keeping the total diet low enough and the body weight low enough, will there be any spontaneous downward tendency? All that can now be said is that in the longest observation, namely nine months in a severe case, the condition is still good. But the most severe cases cannot give the answer. To keep these patients alive at all probably involves a strain upon the pancreatic function, comparable to the strain of excessive carbohydrate-free diet in the milder cases. This girl who has been in the hospital for nine months has improved subjectively and seldom needs fast-days, and is expected to go home before long; but when it was attempted recently to add half a small grapefruit to her carbohydrate-free diet, the result was an immediate glycosuria which required a fast-day to stop it. In these other cases, the addition of a few grams of protein or fat makes trouble. That is how close the margin is, and it is too dangerously close. It may be considered probable that these very severe cases will go slowly downhill, and that treatment can merely prolong their lives and keep them more comfortable, without saving them. From the experience with milder cases, we might think that when these very severe patients are kept free from glycosuria for several months continuously, their tolerance ought to improve. So far, this hope has been disappointed. Gain in tolerance marks the milder cases. In the cases of utmost severity, it is as if the trouble were organic, or as if the breakdown, if functional, were beyond repair. An interesting theoretical question is raised as to the reason why apparently all patients, even those with total diabetes, can be free from glycosuria and acidosis if brought to a starvation level, but cannot tolerate any attempt to raise them much above this level. From a practical standpoint, even under ideal conditions, I cannot see much hope for the third and fourth patients described here. The second would make an interesting study if she could be kept under ideal conditions. The first patient is much more hopeful. The important practical point is that patients should never be allowed to reach any such condition. All four of these patients came under medical care near the outset of their trouble, but the physicians did not stop the glycosuria or the ketonuria in a single one of them. A boy of sixteen years has recently been admitted to the Hospital with heavy glycosuria of only a month's duration. His urine was made normal in two days, and he will be dismissed with a favorable prognosis conditional on good behavior. The cases of utmost severity are really useful chiefly as tests to demonstrate the benefits of methods which should be applied to all cases before they become severe. If there is ever to be the ideal epoch of treatment which I mentioned above, it can come only through the application of efficient, intelligent methods by the great mass of general practitioners, who are the ones that see the great mass of diabetics in the early stages. When such methods are used from the outset, we shall have opportunity to learn whether downward progress in diabetes is inevitable.

There is now to be considered the human factor. This involves recognition of the important fact that conditions are seldom ideal, human nature is imperfect, and the treatment is long and onerous for both physician and patient. Nevertheless, one of the principal hopes that I have for this treatment is that it will prove useful in assisting the human factor. This proposition may be discussed in relation to the physician and to the patient. However specialists may feel, there is no doubt that a majority of average practitioners feel bewildered and helpless concerning diabetes. The widespread use of drugs, proprietary nostrums, and various irrational treatments probably indicates not so much confidence in these things as ignorance of other means to use. Granting that the principle is correct, there should be considerable value in impressing physicians at large with the idea that diabetes is merely the weakness of a bodily function, not a progressive fatal disease. Many physicians fear to withdraw carbohydrate, if the withdrawal causes any marked ketonuria. Accordingly, they give carbohydrate and thus send the patient downhill with continuous glycosuria.[11] The treatment above described will stop glycosuria very promptly, and instead of producing ketonuria will abolish it if it already exists. It will

be beneficial if the general medical profession comes to realize that the interests of the patient require the stopping of both glycosuria and ketonuria, and that it is possible to stop these things within a very few days.

Taking up the patient's side of the matter, it can be said that no one has yet refused to take the treatment. The treatment is rigorous, especially in severe cases, but every patient has reported increased comfort, and has preferred to endure the low diet rather than to return to what he suffered before beginning treatment. Gastrointestinal troubles are absent. The patients have shown none of the carbohydrate hunger which is supposed to belong to diabetes. When asked what they would like to have added to the diet, they have said bacon more often than bread. In view of the opportunity to choose patients, the question arises as to what sort should be selected. The choice might be limited to intelligent, well-to-do, careful persons, and thus an attempt made to show what can be done under ideal conditions. This might be called an unfair test, since most physicians and hospitals cannot thus select their patients. Therefore up to the present, patients have been selected solely on the basis of severity, without regard to character, intelligence, or surroundings. Also, it could be arranged to keep all these patients by themselves. But since some hospitals cannot do this, most of our patients are now kept in wards along with cardiac and other cases, where they might steal food if they tried hard enough, and where they can see trays of bread and desserts going to other patients. These are conditions which they must face when they leave the hospital, and they might as well be accustomed to them. There has been practically no trouble on this account. By taking patients who are poor, ignorant, careless, and lacking in self-control, it is made certain that our statistics will suffer. Some of these patients will promptly relapse, and others will drop out of sight and never be heard from again. These conditions must all be faced, in order to learn what can be done with the ordinary run of patients. The ultimate results will fall easily into two groups. When the patients follow instructions carefully, we shall learn what happens under good conditions. If they go downhill under these conditions, the scientific factor will be at fault; this will be the test of it. But when the patients fail to obey instructions and proceed to eat bread and potatoes, this will have nothing to do with the theory of the subject, and will represent merely a failure of the human factor.

It will be of interest to know whether our method can help this factor. Most patients of all classes desire to live, and desire to be free from the symptoms that trouble them. Our severe cases have nearly all been told elsewhere that they must die, and even the milder ones generally have a wholesome fear of the word diabetes. It seems to make a very good beginning when they are told that their glycosuria will cease within a few days; that they have not a mysterious fatal disease, but merely the weakness of a bodily function, like a weak stomach, and that it is entirely their own responsibility to live or die. Even for the patients who could be cleared up within a few weeks or months by the older methods, it seems an advantage to clear up the urine within a few days, and devote the remaining time to getting the patient accustomed to his diet and teaching him to take care of himself. On leaving the hospital, the patient is given orders as follows: to save and test his urine every day by Benedict's method, which even the ignorant can learn; if sugar appears, to check it instantly by a fast-day and then reduce his diet somewhat; to take a fast-day in bed at stated intervals, generally once in two to four weeks, even if sugar does not appear; to live on a diet of certain articles of food in certain approximate quantities; and instead of weighing the diet, to weigh himself at least once a week, and never let his weight rise above a stated figure. This figure is always below his original maximum weight, and is made lower in proportion to the severity of the diabetes.

As mentioned before, only the immediate results are stated as facts, and time must decide concerning the permanent value of the method.

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SOME PERILS CONFRONTING STATE CARE OF THE INSANE.*

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The purpose of this paper is to call attention to old evils appearing in more virulent form at the present time. The centralized management of all state institutions, quite popular throughout the country, makes a brief review of the history of the public care of the insane both pertinent and instructive. The history may be roughly divided into three periods: first that of

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neglect, second of mixed care, and third of state care.

The period of neglect began in early Colonial times and extended through the first days of the republic to the beginning of the nineteenth century. The failure to properly provide for the insane during these early years may be attributed to infrequency of the disease, and profound misconception of its real nature rather than any lack of the true spirit of charity. In the very earliest Colonial days one may possibly trace a certain portion of this indifference to the austere religious conception of life characteristic of the Puritan. These serious religionists may have regarded the misfortunes of the insane as a judgment of God upon some moral perversity or short-coming. It is conceivable that their mental attitude may have curbed any feelings of sympathy which might naturally be awakened by the sufferings of the mentally afflicted.

Probably infrequency of the disease during the Colonial period was the most prominent underlying factor in this early neglect of the insane. During this period there were few insane, not merely because there was a sparse population, but because the early colonists were strong virile men and women. There were few weaklings. These first settlers were both mentally and physically the best equipped of their race. They were the ambitious adventurous pioneers, anxious to secure for themselves larger liberty in a new land. The very qualities of mind and body that led them to renounce the easier life in their native land and endure the privations and hardships of a new and unsettled wilderness were inconsistent with brain weakness. Insanity was rare because these earlier inhabitants for the most part possessed sound minds in sound bodies. Apparently mental defect was so infrequent that communities regarded as freaks such sporadic cases as did occur, rather than mentally diseased persons whose maladies might reappear in others and require special care. This disregard of insanity was a logical result of the prevailing misconception of its real nature. Consequently defective and insane persons of the early Colonial period were, if poor, allowed to roam at large with little or no care. Among families of means such cases were segregated and cared for at home as well as circumstances would admit.

Eventually the increasing number of mentally diseased persons made some sort of recognition imperative both for their own safety and that of the community. It was evident that public care in some form must be adopted. The problem, being a local one, its solution was sought within the conventional boundaries of the township. The town officials were called upon to care for their own insane as best they could, in the poorhouse or other extemporized way.

In some states, especially the less populous, the town system of care was felt to be inadequate. The numerically small town and the town with limited finances found the expense burdensome; they could not provide suitable and in some instances even decent care. As facilities for intercommunication multiplied, the mutual interests and common relationship between towns in the same county became more manifest, with the resulting conviction that the county could furnish better care for all the insane within its boundaries than the towns acting independently. In these states county farms with large acreage and many buildings were established, and the old town poorhouses were closed. The result was greatly improved care of the insane. The larger unit not only provided better care, but under this system there was a diminished feeling of disgrace in the mind of the recipient of this form of public charity. The closer the donor to the beneficiary, the more intimate the personal relationship between the two, the more keenly does the recipient feel his misfortune.

As has been said, the period of mixed care, roughly speaking, began in the early days of the nineteenth century. With few exceptions, at that time the majority of the insane were maintained at the expense of the towns. Town care was generally accepted as the only method of public provision for the dependent insane. Early in the nineteenth century an awakening to the needs of the insane appeared. Partial state care was advocated, a method which received staunch support in Miss Dorothea Dix. The movement spread throughout the country, and state institutions appeared throughout the land. While these were nominally state institutions, no attempt was made to provide within their walls for all the insane in any state, nor was entire state support of all the patients admitted contemplated at that time. During this period of mixed care the dependent insane were supported and cared for by the town, the county, and the state in the three different classes of institutions enumerated.

During all these years experience was demonstrating that in the field of public charities and corrections the state is better fitted for the administration of the complex problems involved in the care of the insane. It is now generally conceded that of the three administrative units—town or city, county, and state—the latter is the one best equipped for the successful care of the insane, involving as it does intricate questions of treatment, prevention, after-care and scientific research. The slow evolution of state care from the remote days of neglect is evidence of the soundness of the consummation attained. The principle of state care achieved only after years of experience and mature conviction is unquestionably logical and correct.

When the asylums, as they were formerly called, were first established, their management was modeled after that of the general hospital, viz., boards of unsalaried trustees, whose only compensation was their travelling expenses.

The governors of the several states selected for these positions, business, professional, and scientific men, whose interest in the work would be assured irrespective of any remuneration. This plan has always proved most satisfactory in the government of either public or private charitable institutions. Partisan political affiliation played no part in the selection of these trustees. The result was a disinterested service freely given by men of the highest ability. The very fact that there was "nothing in it," in the sordid political sense, kept away "grafters" and secured permanency of service. At first only men were appointed on these boards, but later and long before the present feminist movement began the need of women's assistance was realized and two or more women were almost invariably represented in the personnel of the boards. The advantages accruing to the state from this form of institutional polity are economy to the state, continuity of service, elimination of politics from the conduct of state charities, and a certain definite zeal and interest in the work that comes from the intimate personal association existing between the superintendent, his medical staff, and the managers of the institution. The more impersonal and the farther removed from the daily life of the hospital is the board of managers, the less the interest and the more mechanical becomes the service. The more intimate the personal relationship between a local board of interested trustees and the superintendent and his patients, the more positive will be the impression upon the hospital. In fact, the successful hospital is the reflection of the character and devotion of its board of managers and their superintendent. Hospitals, like persons, have an individuality, which, after all, is merely the expression of the devotion, enthusiasm, and experience of those in charge.

The government of the state's charitable institutions by unsalaried boards of trustees has the distinct advantage of stimulating a general public interest in such charities. Undoubtedly this idea primarily suggested the management of the general hospitals by unpaid trustees. Society does and should take an interest in the benevolences of the state. Such interest should be fostered and utilized in every possible way. If professional and business men, or those with leisure and large experience in charitable work, are willing to devote their time and energy without remuneration to the administration of our public charities, by all means should such service be accepted and encouraged by the state as a civic obligation of its citizens. Not only is economy secured to the state by such gratuitous service, but a zeal and spirit of devotion is attained that is invaluable. One of the chief objections to the old town and county care of the insane under partisan political appointees was the indifferent service rendered by such management. Scientific study, proper classification of patients, and intelligent care were too often sacrificed to a spirit of petty political economies, which lost sight of the real purpose of the charity.

Within recent years an entirely different system of institutional polity has arisen. Under this method all the state's charitable and penal institutions are placed under the management of central boards of control, with offices at the state house. The local boards of trustees, who met at the institution over which they were appointed, are abolished. The board of control usually consists of three members, who have salaries and are appointed with some reference to their party political affiliations. Women are not represented on these boards and consequently are not represented in the management of any of the state institutions. The new system, beginning in the West, has recently moved rapidly eastward, and for obvious reasons has become quite popular with the politicians. A fancied economic saving to the state has, however, prejudiced many well-meaning persons in its favor. Misled by specious reasoning, based on a somewhat illusory theory that administration of the state's charities by a board of control is founded on sound business principles and that a great saving to the state is to be thereby effected, these very fair-minded persons hastily subscribe to the new doctrine without sufficient reflection as to whether the new polity is really economical and most desirable in the long run for the administration of the state's charities. It may be well to consider carefully the merits and demerits of a system which threatens to abolish an institutional polity that has had the sanction of time and experience and which still is the only recognized form of institutional management in all private charities. With the general acceptance of this principle of state care of all dependents, attention has been directed as never before to the magnitude of the expense involved. This expense was not as noticeable when divided among counties and towns, but when presented in the aggregate in a single lump sum looms up as one of the largest financial burdens that the state has to carry. Central supervision over this expenditure is both logical and necessary. The principle of centralization in business management is sound and there is no reason why a state in the direction of its charities should not be guided to a certain extent by the same economic considerations that prevail in the business world. At the same time there is a difference in the final purposes of a large business organization like the Standard Oil or the U. S. Steel Corporation, whose sole ambition is financial return to stockholders, and the charities of a state, whose chief mission is the alleviation of human suffering. In the attempt to centralize the management of all state charitable institutions there is a real danger that the original mission of these charities may be sacrificed to an arbitrary and mechanical business theory. Economic administration of

the state's charities is only one side of the equation. As at present constituted, boards of control attempt a double service for the state,—fiscal supervision and administrative control of the institutions. These two functions, although closely related, need not necessarily be imposed upon the same board. While the steadily increasing cost of maintenance renders fiscal supervision by the state necessary, it does not follow that administration of the institutions can be more economically or more satisfactorily conducted by central boards of control than by carefully selected unpaid boards of trustees.

In the management of the state's charitable institutions we find then that fiscal supervision and administrative control are the two desiderata. The problem is to so correlate these two phases of institutional polity that the best interests of the wards of the state may be conserved with the least possible expense to the state. In the new system of centralization the fulfilment of this double obligation is placed upon the board of control. The wisdom of this course is questionable. While centralization may be desirable in the control of expenditures and possibly in the purchase of supplies, its application to the administrative detail of the institutions may be unfortunate.

With certain slight differences in the various Western states, boards of control as originally devised were composed of three members, with salaries of $3500 each, or thereabout. These boards appointed the superintendents and purchasing agents for the institutions, and assumed the administrative and advisory functions that formerly belonged to the trustees. These boards had exclusive control over the finances and management of the penal and charitable institutions of the states. In many states local boards of visitors were appointed without pay except for traveling expenses, a sort of concession for the removal of the trustees. Women were represented on the board of visitors. It is significant, however, that these visitors are not responsible for the management of the institution, practically have no authority and naturally lack initiative. These visitors are practically figure heads, replacing the former trustees. The distinguishing characteristics of the new system are the central government of the institutions in both their physical and financial aspects, the divorce of the business and medical management of the hospital, and the obliteration of the individuality of the several institutions.

With presumably economical intention many modifications of this original scheme have appeared without, however, increasing the efficiency. In New Hampshire a board of control has been appointed with the purchasing agent as a member. This purchasing agent receives a substantial salary and devotes his entire time to the work, while the other members receive a *per diem* remuneration and devote such time as in their judgment seems advisable. Modifications of the original plan in the interest of economy are questionable. It would seem advisable that if management by a board of control is adopted the members of the board should devote their entire time to the work, even though the expense is larger.

In still another state the following rather complicated plan has been proposed which would certainly have the merit of providing many salaried officials with positions involving large expense. This plan provides a central board consisting of five members with salaries of $1000 each, whose functions are general and advisory. The central board appoints a director. This director must command a large salary, for he is endowed with vast powers, including the appointment of four assistant executive secretaries with large salaries, a business agent, the superintendents of the several institutions, as well as supervision and control over everything pertaining to the administrative and financial affairs of the hospitals, including all new construction. Under the director the four executive secretaries come into immediate contact with the details of the institutions, in a way replacing the former unpaid trustees. The business agent executes the orders of the director and appoints a purchasing agent, with offices, clerical force, and facilities for purchasing and storing supplies. Last, is an unpaid board of visitors, who have no authority except that of listening to complaints, which they cannot correct personally, but may report to the central board. This somewhat involved plan provides control galore. First a central board, second a director, third four executive secretaries, fourth a business agent, and fifth a purchasing agent with expensive offices, clerical force and storehouses. This plan, much more complicated than any previous method, is the latest academic creation of the professional efficiency expert. It is difficult to see how either efficiency or economy can be secured through such a complex and expensive organization. Whatever modifications of the original plan of centralized control may have been adopted, the ultimate purpose has been the withdrawal of local management from the institutions and the substitution of a central board with plenary, fiscal, and administrative power. Assuming that these two functions can be separated, what are the objections to administrative management of state institutions by a central board? First, too many and varied duties are imposed upon a single board. It is questionable whether three or even five officials at a central office can be of as great service to the charitable and penal institutions as local boards of trustees in close touch with individual institutions. The amount of time which a central board can give to the administrative details of many institutions of diverse character, situated in widely separated localities, must of necessity be quite limited. The problems vary greatly in the different institutions. Those of the feeble-minded

schools are not identical with those of the insane hospitals. Even the institutions for the insane differ among themselves. The hospitals for the acute, the chronic, and the criminal insane present peculiar and special problems, whose solution demands more time than a single central board has at its command. Neither can these special questions be satisfactorily settled by a board of visitors upon whom rests no final responsibility. What incentive or satisfaction can a board of visitors experience who feel they have no responsibility and who do not know that their suggestions or advice will be heeded by the real managers?

Second, lack of sympathy between the central board and the various hospitals. Successful administration of hospitals and charitable institutions depends directly on the active sympathy and personal interest of their boards of managers. Such interest can only be secured by intimate personal contact, frequent visitation, and close familiarity with the inner working of the hospital, and acquaintance with the actual needs of the patients. Weekly conferences at some central office between the superintendents and the board of control are not as helpful and stimulating to the superintendent as were the frequent visitations of the trustees and their meetings at the hospital, with free opportunity for consultation and helpful suggestion. A central board of control, with many duties and numerous widely separated institutions for visitation and supervision, must give brief and perfunctory service to each. The very fact that it is physically impossible for the board to give the necessary time to the several hospitals renders the service mechanical, and deprives the superintendent of the advice and consultation he so much needs. It is doubtful whether a board of control, visiting many institutions, can ever be in as close sympathy with the work of any particular institution as a local board of trustees who are devoting their time to the service of that institution alone.

Third, the elimination of women from any participation in the management of the hospitals. The principle is now firmly established that women should be represented on the boards of managers of any institution caring for women and children. Whether it is because members of boards of control are really political appointees, or because women are not supposed to be equal to the larger duties attaching to this service, it is significant that whenever trustees of state hospitals have been replaced by a central board of control, women have not been represented in the new management. In some states women have been relegated to the inconsequential boards of visitors, which really means that they have been removed from all actual participation in the activities of the hospitals.

Fourth, the possibility of politics entering the management of state charities. Under this system, the danger is always imminent that partisan political preference may determine the personnel of the official board directing the state's charities. Government of state institutions by boards of trustees possessed this one great merit, that the men and women composing these boards were selected solely because of their fitness, without any reference to their political affiliations. General fitness and adaptability for the work and not political patronage should determine the selection of men for these positions. It is willingly conceded that most excellent men have been and still are being appointed on these boards of control, but the possibility that political considerations may at any time influence their selection is a menace. State charities should be as free from political interference as private charities. Fifth, the principle that the medical administration must be separate and distinct from the business administration, is not sound in theory nor beneficent in practice. In institutions ministering to human illness or defect the medical and the business relations are so intimate that complete separation is not possible without defeat or impairment of the very work for which these institutions stand. Any plan that seeks the divorce of the medical from the business administration is in danger of commercializing charity. The state hospitals for the past twenty-five years have been steadily assimilating the true hospital spirit. Treatment has been assuming greater prominence. The old almshouse treatment of insanity, based on economy carried to parsimony, has well nigh disappeared. The state hospitals have entirely reformed these obsolete methods. Trained nursing, carefully prepared dietaries, study of individual cases with proper treatment, both medicinal, psycho-therapeutic, and hydropathic, industrial employment, pathological research, prophylaxis, field work, and after-care all enter into the work of the hospitals, and are all essential medical questions. Any attempt to isolate and withdraw these activities from the business administration of the hospital is impossible. The general hospitals have long since demonstrated that the medical and the business administration cannot be separated without detriment to the usefulness of the hospital. From this let it not be argued that extravagance will follow, nor that it is desirable or necessary. The real problem is, how the business and the medical administrations may be correlated, and some workable plan devised by which the mission of the hospitals may be efficiently and economically realized.

It is not absolutely certain that central purchasing by a single purchasing agent is as economical as local purchasing by the institutions under competitive bids with central fiscal supervision and audit. The purchasing of supplies for a hospital is not identical with the purchase of supplies for a large railway or mercantile corporation. The character of many of the goods used in hospitals, the danger of dete-

rioration, and the expense of central storage and distribution render the economy of this method doubtful. Such plan can only be economical in large states with many institutions of a single class, and even then is of doubtful value.

In his exhaustive analysis of the "Methods of Fiscal Control of State Institutions" made for the State Charities Aid Association of New York State, Henry C. Wright finds that of the three methods of supervision studied, namely, those of New York, Iowa, and Indiana, the greater saving was in Indiana, in which state the institutions are managed by local boards of trustees under the supervision of a state board of charities. "The larger costs noted in connection with New York and Iowa are, in large measure, the cost of supervision of details of the administration of the institutions, which, in Indiana, remains in the hands of the superintendents of the institutions. These details are handled as satisfactorily by the superintendents in Indiana as by the central supervising officers in New York and Iowa." Undoubtedly in this statement lies the exact truth,—any theoretical saving by central administration is more than offset by the increased expense of maintaining the system.

There is no reason why, under a well-devised plan of coöperative and competitive buying, the institutions cannot purchase goods of the same quality as economically as a central purchasing agent. It is easily possible for a man, intent on buying only the cheapest goods, and unfamiliar with institutional requirements, to purchase inferior articles, the attempted use of which will cripple the efficiency of the institution. In a hospital the judgment of an experienced medical superintendent may be wiser than that of a lay buyer, unfamiliar with the real needs of the institution. On this point Mr. Wright says: "It seems difficult for the fiscal supervisor to bear in mind that the primary function of the institutions under his charge is, where possible, to heal and reform. There is a mass of evidence which will make it appear that his first concern is for small economies rather than for efficiency in operation."

In those states where boards of control have been or are about to be established, many of the evils of such a system can be forestalled by having at least one woman on the board, by holding stated meetings of the board at the various institutions at least once a month, by making the purchasing agent, where such an official exists, an agent and not a member of the board, and by legislation requiring the board to give their entire time to the work, with such remuneration as will secure an able and efficient personnel. Merit and experience, and not partisan political influence should determine the selection of the membership. The presence of a woman on a board of managers having the custody of women inmates in various institutions is most desirable. In countless administrative matters her experience and point of view may prove most helpful. Her active presence in meetings would contribute greatly toward removing the charge and danger of political bias. By holding regular monthly meetings at the institutions, the board comes into more intimate and personal relations with the institutions and their work than when board meetings are held at a central place, as the State House. The management of the institutions in consultation with the board of control, and not the purchasing agent, should standardize and determine the selection of goods, not an independent buyer whose sole aim may be price, not quality, and who personally may be quite unfamiliar with the actual needs of the institution.

In Maryland a most admirable system of coöperative buying has been adopted in the state institutions. According to this plan the hospitals have a central bureau, to which all requisitions are sent at stated times. All institutional supplies are standardized and samples are on exhibition at this office. From this office advertisements for proposals are sent out and contracts signed with the lowest bidders. Little expense is entailed under this method, and the institutions secure the class of goods they require at the lowest possible cost.

The peril that at the present time menaces state care of the insane is excess of control. The institutions and the officers who manage them may become so hampered by petty supervision as to lose efficiency in operation and management. Just as the overtrained athlete loses his spirit and his nerve at the crucial moment, so will the hospitals under excess of control forfeit the true hospital spirit and the initiative that formerly prevailed. There is danger that they will become mere receptacles for housing and feeding large numbers of inmates without showing any very great financial saving for the state, thereby losing sight of the scientific and therapeutic aims for which these institutions stand.

After all why is this expensive machinery of control necessary, unless to provide many more high-salaried officials? Mr. Wright in his report with great justice states that what the institutions and the superintendents most need is advice of experts, uniformity of accounting and reporting, and standardization, as far as is possible, of all hospital supplies. The securing of these considerations does not require complicated and expensive supervisory boards. What is really needed is central fiscal supervision, with as large a degree of local independence as is necessary to secure efficiency and economy.

Mr. Wright's recommendations contain much that will appeal to the trained institutional worker. A central supervising board, serving without pay, and having "function of inspection, recommendation, and advice, combined with a partial power of control." This board to have as salaried secretary a man of "marked

ability," and familiar with institution requirements, and also empowered to employ experts, as they may be needed to give advice on all matters pertaining to the life and well-being of the institutions. Boards of managers with women representatives appointed for each institution by the governor. Advisory relations to exist between the supervising board and the managers. Stated conferences between the superintendents and the managers. Joint purchasing of supplies with such expert advice and laboratory tests as the supervising board may deem necessary. Under some such general scheme the state will maintain control over all expenditures, its interest in and direction of its charities will be attained with the smallest possible outlay. Individual civic responsibility to the state will be secured through volunteer workers. Public charities and correction will not be imperilled by partisan political interests. Efficiency, economy, continuity, and permanence of service will characterize the management of our state institutions.

THE PRE-OPERATIVE DIAGNOSIS OF TUBERCULAR MESENTERIC AND RETROPERITONEAL GLANDS.

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With the advent of greater perfection in the technic of the Roentgen ray examination and diagnosis of abdominal conditions there is still felt the need of greater refinement of diagnosis of the acute conditions, especially of the right lower quadrant.

The clinical investigation undertaken in this paper was stimulated by the recent occurrence in the author's practice of several cases strongly simulating appendicitis and distinctly of the operative type, but which on opening the abdomen, were found to be what I think we can properly term the acute fulminating type of retroperitoneal or mesenteric adenitis of tubercular origin.

The attempt is made in this paper through the analysis of a series of autopsy and clinical records to throw some additional light on the preoperative diagnosis of this condition,—primary retroperitoneal and mesenteric tubercular adenitis.

The type of this disease, which is secondary to general or intestinal tuberculosis, is not considered in this paper, but only that type which has recently come to be recognized as a definite and separate clinical entity, but which so often simulates and is mistaken for the acute conditions occurring in the right lower quadrant of the abdomen.

This type of case occurs quite frequently in both private and hospital practice, especially in children and young adults.

Clinical surgical experience shows that there are certain cases which present a definite picture of an acute right lower quadrant condition, most often simulating appendicitis, which on operation show a normal or slightly congested appendix and no other pathology than masses of retroperitoneal glands in various stages of enlargement and in which no other tubercular foci can be found anywhere in the body on most careful examination.

These isolated glands or groups of glands may occur anywhere in the mesentery, but are most commonly found in the ileo-cecal region.

Corner, who seems to have had considerable experience with this class of case, and to whose papers many references are made in the literature, thinks that there is a physiologic reason for this location in the comparative stasis of the products of digestion in a mildly alkaline medium at this site; a condition which favors the passage of tubercle bacilli through the intact mucous membrane of the bowel.

Corner also believes that tuberculous mesenteric glands are to be found in practically every child in which an abdominal operation is necessary. This great frequency and the fact that glandular (non-tubercular) enlargement is so common in other regions of the body in children coincident with any pathologic condition, makes the raising of the question of the tubercular nature of these glands in children a pointed one.

There are many reported instances in which the removal of an apparently normal or only slightly congested appendix was followed by the subsidence of all symptoms and even by the disappearance of glandular enlargements. And whether we grant that this mesenteric adenitis, in very young children, is of tubercular origin or whether it be a simple adenitis so common in all inflammatory or other conditions in young children, the facts still remain that this type of disease often does produce a chain of acute right lower abdominal symptoms of such a type as generally to demand surgical intervention. It seems arguable to the writer that as these glands are so commonly found in many conditions in young children, for which the abdomen is opened, and as these children ultimately go on to complete recovery from their surgical condition and do not suffer in the future from further enlargement of these glands, therefore we may believe that a mesenteric adenitis is a common condition in children, from which they recover spontaneously, also from which it is the exception rather than the rule to have symptoms; that these are probably more likely to be of inflammatory than tubercular origin and from which they may be expected to recover without further morbidity.

When we discuss this condition in adults, however, it seems reasonable to suppose that glands which have persisted since childhood or have developed recently are much more likely to

be tubercular in origin and that in them we may expect the clinical picture described in this paper.

Corner believes that milk and the bovine type of tubercle bacilli are the primary factors in the causation of this disease, and when the condition is in an advanced stage and there are many glands in the lymphatic chain Talbot has shown how the absorption of fat may be prevented by the blocking of the lymphatics by these glandular masses.

Three or four pertinent questions arise in the diagnosis and treatment of this class of case.

1. If the history, past and present, and the physical signs are carefully gone over, is there not a symptom-complex or certain more or less distinctive picture by which we can more accurately make the preoperative diagnosis?

2. How can this condition be differentiated from appendicitis?

3. What is the prognosis? With operation? Without operation?

A brief review of the essential facts to be noted in this type of infection is as follows:—

1. The disease is extremely common in infancy and childhood, but by no means confined to this period, being nearly as common in young adults. In fact, the highest percentage favors the years between 6 and 18. It is not uncommon in persons up to 40 years of age. One case in this series was 58 years old, but occurrence at such a late age is extremely rare.

2. Corner's attempt to divide the condition into an adult anatomical type which occurs in the region of the cecum and gives pain in the stage of caseation, usually diagnosed as appendicitis without palpable tumor, and a type peculiar to young children in which there are palpable glands usually in the free mesenteric edge of the small intestine, we believe should not be made, as numerous cases in this series and those reported by other writers show no difference in type assignable to age; both types being found in the very young and in the adult.

3. Two clinical types, however, are noticeable:

(*a*) Distinctly palpable masses of glands accompanied by none or only vague abdominal symptoms.

(*b*) Cases with alarming abdominal symptoms and signs developing suddenly when there are no palpable glands demonstrable.

It is a notable fact that unless the glands are sufficiently enlarged to form palpable masses there are probably no symptoms present which would suggest a tubercular infection, while when there are pronounced symptoms such as diarrhea, night sweats, temperature, etc., it is probable that there are other tubercular foci elsewhere in the body which are causing this train of symptoms and that they cannot be referable alone to the mesenteric involvement. On the other hand, primary mesenteric glandular tuberculosis may be the only underlying cause of a train of sudden acute right lower quadrant symptoms demanding surgical relief. For this reason the diagnosis is often difficult or impossible.

Symptoms:—

(*a*) There may be none; even in the presence of palpable masses of gland.

(*b*) The condition may be discovered only at operation for some other condition; the glands being too small for palpation through the abdominal wall.

(*c*) Trivial symptoms such as fleeting and not severe right-sided or general abdominal pain with or without disturbance of digestion and bowel regularity, the general health being good or the patient being of the pale rather "sickly" type.

(*d*) More or less constant fairly well localized abdominal pain with generally a "soreness" referable to the region of the cecum; the most likely situation of the growth. Physical examination may or may not show the presence of resistance or an ill-defined glandular mass.

(*e*) Sudden (or gradual) onset of general, then localized abdominal pain confined to the right lower quadrant, rise in temperature up to 99, 100 or 101°, nausea and vomiting, constipation or diarrhea, and on physical examination, acute localized tenderness with spasm and resistance, a white count up to 12 or 15 thousand, and a very sick appearance. There may be distention, complete obstipation, severe vomiting and all the signs of obstruction. (This latter, however, is rarely present unless there is a real obstruction, which is due to extension of the tubercular process matting and binding intestines together.)

That the process is sometimes a fulminating one and that the glandular enlargement sometimes precedes a general tubercular peritonitis and may be cured by operation is shown in the following case of this series.

L. L. H., 9 years old, had lived in a country district, had had much out-of-doors' life, but had never been very robust. He was pale but considered healthy. He had had no previous illness. He was taken suddenly 48 hours before seen by the writer with sudden general abdominal pain, nausea and a few watery bowel movements followed by constipation. Castor oil, given by the local doctor, was vomited; the patient looked sick and had a slight fever. As no improvement took place in 48 hours he was transferred to the writer's care.

P. E. showed distended abdomen, general abdominal tenderness, no masses. Temp. 101°, W. C. 9000. A diagnosis of intestinal obstruction, probably due to intussusception, was made. At operation the lower ileum was found adherent to the side of the ascending colon near the cecum, and to a large ulcerated T.B. gland in the mesentery. Several smaller glands were found in the adjacent mesentery. Exploration of the rest of the abdomen failed to show any other pathology. The peritoneum was smooth and not injected. The convalescence progressed satisfactorily but slowly till the 11th day, when signs of further intestinal obstruction developed and the abdomen was again opened

and a few fresh adhesions freed, and to the great surprise of the operator and his assistants the whole peritoneum, both parietal and visceral, was found to be thickly studded with tubercles, several of which were excised and reported to be tuberculous. The convalescence from that time was uneventful. The patient has been seen four times since at intervals of a year apart, has gained in weight, there are no masses or fluid present. This case is of unusual interest in that the development of the tubercles took place so rapidly after the first operation. The patient has at present a hernia in scar, for which it is hoped he will seek operation later. The final condition of the abdomen can then be recorded.

It is evident, therefore, that we have in tabes mesenterica a condition which, like appendicitis, the lesion with which it is most often confused, has a variety of symptoms and signs, none of them distinctive in themselves and from the analysis of which we are seldom able to make an exact preoperative diagnosis.

If the patient is pale and "sickly," has had more or less localized right-sided abdominal pain and has a low fever and white count with palpable glands and is a child or young adult, the diagnosis is easy, the picture being clear. But in the absence of palpable glands and with an acute onset with high fever and white count the condition is naturally diagnosed as appendicitis.

With the idea of perhaps shedding some light on the question, especially of symptomatology and past history in these cases all the autopsy records of the Massachusetts General Hospital have been gone over and these cases analyzed from a pathological as well as from a clinical point of view.

In 65 cases in which one or more retroperitoneal or mesenteric obsolete or active tubercular glands were found at autopsy, the clinical record of each case was looked up, especially from the point of view of past history, previous health, and attacks of abdominal pain. And in so far as hospital records show or are of value in determining this point, none of these 65 cases had anything in their past history which could be interpreted as referable to the presence of tuberculous retro-peritoneal or mesenteric glands.

These cases of course do not include those cases operated on for this condition, but only cases in which a diagnosis was *not* made before death, and one or more glands were found incidental to other conditions at autopsy. This seems to indicate that very many people harbor obsolete or quiescent tubercular glands of even considerable size without ever having any symptoms referable to them.

This is well illustrated by the fact that in 4 cases the glands were adherent to the intestines, in 3 there was ulceration present, in 5 there were great numbers of glands and in 5 masses the size of the fist or larger were present, and yet no symptoms resulted.

These masses are variously described by the pathologist as follows: Obsolete tubercular mesenteric glands, large masses of obsolete tubercular glands adherent to wall of the intestine, many retroperitoneal glands along the wall of the aorta, mass size of an egg caseous and calcareous, soft tubercular mesenteric glands, adherent tubercular nodes in the mesentery, retroperitoneal and in the omentum, soft and caseous glands, slightly ulcerated at base, large fibroid calcareous mass near the cecal valve; and yet no symptoms could be found in the past or present history referable to these masses, the patients dying of such conditions as broken compensation, pneumonia, typhoid, brain abscess, septicemia, glioma of brain, aortic regurgitation, pyonephrosis, appendicitis, empyema, etc.

It is fortunate that there is never much question as to the treatment in the acute cases. The condition is an acute adominal one and demands surgical relief.

Adhesions may be found with true ileus, ulcerated or necrotic glandular masses may demand removal or drainage, or large masses of glands producing pain may also demand removal. This latter circumstance is well illustrated by a case reported by Newbott in which appendicitis was diagnosed but only a few calcareous glands found in the mesentery of the lower ileum at operation. These were not disturbed, the appendix only being removed. After operation the patient complained of the same pain as before operation; six months later the abdomen was reopened and the glands removed, with prompt relief of symptoms.

The indication seems, therefore, to be for the removal, in the absence of other pathology, of plainly palpable glands which evidently cause symptoms.

In view of the fact that cases of tubercular mesenteric adenitis get well from the mere opening of the abdomen, as tubercular peritonitis cases recover after the same procedure, and that this is the testimony of many surgeons seeing numbers of these cases, it seems reasonable to state that when there is no indication for drainage and the masses do not readily lend themselves to enucleation, good results may be expected from non-interference and proper after-care.

The much mooted question of why cases of tubercular peritonitis so often recover after simple exploratory laparotomy, seems to find its answer in this type of case. We have learned the pathology by our exploratory operation. The patient is then put under the best hygienic conditions to combat his tubercular tendency, he has proper care, his symptom responds to treatment and he overcomes an infection which in many people lies dormant for years without causing symptoms at all. It is not the fact that the abdomen has been opened to fresh air or sunlight that effects a cure, but the fact that the patient from then on has proper care, based on an accurate diagnosis.

An analysis of 30 cases operated on at the Massachusetts General Hospital for some more or less acute abdominal condition, and in which

definite mesenteric or retroperitoneal glands were found at operation, show some points of value.

There were only 3 cases in which the glands were retroperitoneal, the mesentery about the cecum being the common situation.

It is interesting to note and pertinent to the purpose of this paper that in only 3 of these 30 cases was the diagnosis of tabes mesenterica made previous to operation.

Other preoperative diagnoses were: appendicitis 10 cases, ileus 3 cases, abdominal tumor 4 cases, pelvic 3 cases, while in the remaining 7 cases the record does not state what diagnosis was made, but as symptoms and physical examinations were described it is evident that the appendix was the organ suspected. In the 30 cases the tuberculous glands were found to be undoubtedly the cause of the symptoms complained of in 17, or a little over half of the cases; in 4 cases it was an open question as to whether they alone could have caused the symptoms, although it was probable, because of their enlarged condition, that they must have been a contributing factor; while in the remaining 9 cases they were small in size and were undoubtedly only secondary to other coincident and more pronounced lesions.

When we try to gather information which will aid in making a correct preoperative diagnosis we are not greatly helped, for only symptoms commonly complained of by those suffering from chronic or recurrent appendicitis are obtainable. For instance, 13 cases had previous similar attacks; of these 8 had general abdominal pain, while 13 (or all the cases) had localized pain either in the previous or present attack.

Of course the physical sign which would be of most value in making a differential diagnosis would be the presence of palpable masses. In 12 cases such masses were demonstrable before operation and in 3 others were discovered when the abdominal wall was relaxed under ether before operation. In 12 cases the history definitely states that no masses were to be palpated. It is here of interest to note that in spite of the fact that masses were palpable in these 12 cases, yet the diagnosis of tabes mesenterica was made in only 3. The masses generally being diagnosed as, abdominal tumor in 4 cases, appendix abscess, pus tubes and in one case floating kidney. This fact certainly shows that unless distinct chains of glands are to be felt, the history is not distinctive enough to suggest a condition of tabes in preference to some more common condition.

The rapidity with which such a process may develop is illustrated by a case in which an appendectomy was done in 1910 and no glands were noticed, although the abdomen was thoroughly explored in routine. In 1913 the case was operated for acute intestinal obstruction and a mass of matted tubercular glands found binding the intestines together. The case recovered. The recurrence of other extra-abdominal tubercular glands coincident with the mesenteric glands seems to be rare. In two cases of this series, glands were present in the neck and groins.

In no case did the white blood count exceed 15,000 except in one in which there was a coincident appendicitis and pelvic abscess. We can, therefore, expect little aid in diagnosis from the blood count.

Operative methods employed have been as follows: Exploratory laparotomy only, recovery one case; 7 cases were curetted and drained; in four cases the masses were too extensive for any operative removal. In two cases the glands were shelled out. The remaining glands were too small or inaccessible or considered too far removed as a cause of symptoms to warrant attempts at removal.

The mortality in this series was 2 cases, or 15%, both cases dying from postoperative pneumonia and not as a result of extension of the process or general miliary tuberculosis.

Two cases were discharged from the hospital with a sinus, but others which were opened and drained, curetted or swabbed out with iodine, completely healed and now show no sinus. In these 30 cases, five have been complete recoveries. In four there is some mass still present, but the patients have no symptoms. Two cases have had similar attacks since operation but consider themselves well. The remaining cases have failed to report up to the present time.

SUMMARY AND CONCLUSIONS.

1. Tabes mesenterica is often a primary disease with sometimes a fairly distinct clinical history and signs. It most often simulates acute appendicitis, and when in this stage should demand surgical intervention.

2. In the absence of palpable glands, however, it is impossible to make a correct preoperative diagnosis in many cases, there being no symptom-complex distinctive enough of this condition.

3. A great many people harbor tubercular mesenteric glands in various stages of activity without symptoms.

4. The disease has two clinical types: (*a*) a slowly progressing one, generally with palpable glands; (*b*) an acute fulminating type, most often simulating and impossible generally to differentiate from appendicitis.

5. The prognosis in the subacute stage is good without operation. In the acute stage exploratory laparotomy should be done, but the glands not removed unless there are definite indications either from adhesions, ulceration or size of mass producing pain or mechanical obstruction.

6. In children and young adults with a history of right-sided abdominal pain, with or without palpable masses, tabes mesenterica should always be considered as a possibility.

I wish here to express my thanks to the surgical staff of the Massachusetts General Hospital

for permission to analyze the records of cases operated on in looking up this subject.

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A LOCALIZED, SUBACUTE FORM OF BRONCHO-PNEUMONIA.

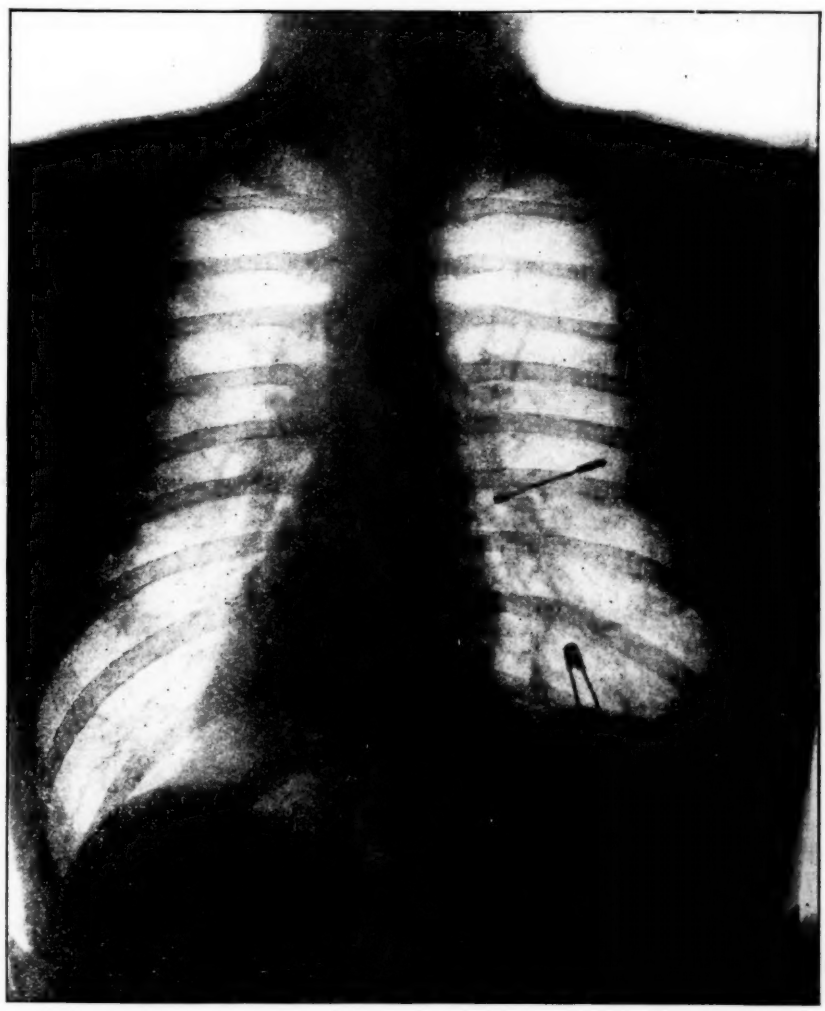
BY RALPH C. LARRABEE, M.D., BOSTON.

W. J. P., a male nurse, age 46, was admitted to the City Hospital on August 4, 1913. He had always been well. About ten or fifteen days before admission he began to cough; this symptom being at first mild, and later only moderately severe. The expectoration was abundant and was stated to have shown slight streaking with blood before admission. He had no pain and was just about sick enough to stay in bed. He stated that, before entering the hospital, his temperature had been as high as 102.2°, but the highest record thereafter was 100°. It ran a low, irregular course and did not remain normal till after the thirteenth day in the hospital, its total duration being three or four weeks. There was nothing like a crisis.

In the lower half of the right back there were numerous, coarse, moist râles. At first there was no dulness and no change in the voice or breathing sounds. Later the râles became finer, and there was more or less dulness and diminution of sounds. Consolidation was never recognizable by physical examination.

The leucocytes were 24,200 on admission, later counts being 19,800, 10,000, 9,600, 11,500 and 15,200, the two latter being obtained after convalescence appeared to be well under way. The x-ray showed a slight, but definite shadow in the lower, outer portion of the right lung, occupying in the plate merely the corner of the lung outside the swell of the diaphragm. There was also some increase in the intensity of the markings, usually considered to be due to the blood vessels or bronchi.

The sputum was examined for influenza bacilli and several times for tubercle bacilli, always with negative results.



W. P. Age 46.

Broncho-pneumonia at right base. The normal markings in the lung are somewhat exaggerated. There is a distinct shadow just outside the swell of the diaphragm.

The patient improved very slowly. The physical signs cleared up gradually, examination being recorded as negative about one month after admission. The total duration of illness, from onset to discharge from the hospital was 58 days.

This case is reported at length as it represents a type which, though very common, has received little notice in medical literature. I have seen a good many such cases in the past few years. This paper is based on a study of seventeen seen in the wards of the Boston City Hospital and in private practice. Perhaps as many more were seen in the out-patient department of the hospital, but these were not included, nor were cases seen but once in private practice or in consultation. The condition may be described briefly as a pulmonary infection, localized in the lower portion of one lung and characterized clinically by lack of definite consolidation, mild course and long duration. Riesman,[1] in 1913, described a series of cases of "A Lobar Form of Broncho-Pneumonia of Long Duration, Occurring in Children and Young Adults." His description corresponds very closely to that of my cases.

About two-thirds of my cases were in males. Their ages varied from ten to seventy-five. In this respect they differ somewhat from Riesman's, which were mostly children and adolescents. Perhaps this is because of the different character of the material making up our respective clinics. My cases occurred at all seasons of the year. I have seen many in the summer. This is in contrast to lobar pneumonia, which is very much more prevalent in winter and early spring.

The onset is usually gradual. Only one of the cases collected in preparing this paper had an initial chill. One other had a chill with a temperature of 102° F., occurring after a "cold" of a week's duration. The notes usually state that the patient "began to cough" or "had a cold." Medical care is usually called for only after the patient has been ill for several days or even two or three weeks. Not uncommonly the patient seeks relief only because the cough and malaise have not cleared up as they usually do after a cold.

The most striking symptom is cough, often severe, bothersome and persistent. Pain was present in but two of my cases. More or less fever is generally present at some stage, though I have seen several cases in which a fairly complete record showed a normal temperature throughout. It may be as high as 103° for a day or two, but the common finding is a low, irregular curve, the daily maximum being 101 or 102°. It varies a good deal in duration, sometimes lasting several weeks, sometimes but a day or two. Recrudescences are common. As might be expected in such curves, the termination is indefinite. I have, however, seen two cases in which the fever was high enough and the termination abrupt enough to constitute a real crisis. But the end of the fever is by no means the end of the disease. Signs and symptoms may persist for weeks or even months after defervescence.

The physical signs are so definite that the nature of the process can generally be recognized at the first examination. One caution is, however, in order. The nature and distribution of the signs are such that unless one is in the habit of making a thorough examination in every office patient or out-patient, with the shirt and corsets removed and the whole chest exposed, they will often be overlooked. Percussion generally shows dulness, low down in one back or axilla, often so slight as to be discoverable only on careful comparison of the two sides. This impairment of resonance usually increases as time goes on, and it may persist after other signs have disappeared. Changes in the voice and breathing are relatively unimportant. The sounds may be increased in intensity at first, and may have to a slight degree the bronchial character that suggests consolidation. Frank consolidation does not occur, or if it does, it is of very limited extent and of very short duration. Later on, both sounds and fremitus are more apt to be decreased.

The most characteristic feature is the râles. They are generally very numerous and easily heard if one listens at the right spot,—most frequently the extreme base. They are very persistent. In character they are coarse or medium, crackling, moist or sticky. With all due allowance for personal variations in the use of descriptive terms applying to râles, I cannot agree with Riesman that they are "consonating"—I think this is very unusual. All these signs are characteristically localized in the lower back or axilla on one side. There may be, for a short time, a few râles at the opposite base or scattered over the lungs, but the most striking feature is the persistent presence of a burst of moist râles at one base.

Satisfactory x-ray plates were obtained in six cases. In two perfectly typical ones the results were negative. In the others definite shadows were present over areas corresponding to the physical signs. The shadows observed have been less intense than in typical lobar pneumonia and even less sharply circumscribed. They have not, as a rule, corresponded in extent with a whole lobe, but have been limited, like the signs, to the lower portion of one lower lobe.

The sputum varies in amount from very slight to very abundant. Blood was present in but two of my seventeen cases,—once for a few days at the onset and once as rare and slight streaking, also in the early days. Tubercle bacilli were sought for in most cases, often repeatedly. Of course no case is included in which the findings were positive.

The leucocytes were counted in thirteen cases. In four the maximum figure was under 10,000, in one between 10,000 and 15,000, in two between 15,000 and 20,000, in four between 20,000 and

25,000, and in two over 25,000. Thus, in the majority of cases there was a leucocytosis corresponding to that of mild lobar pneumonia. In several instances the persistence of the leucocytosis was very striking, it having lasted well into convalescence, after the symptoms and signs had well-nigh disappeared. Persistent leucocytosis, then, is a striking feature.

Blood pressure observations were made in most cases, without striking results except in one instance. This was a man of fifty-eight, whose urine showed albumen and casts for a few days during the height of the disease. The systolic pressure was persistently low—70 to 75 millimeters of mercury. During convalescence it gradually rose, but as late as two months after the onset, long after he had left the hospital, it was recorded as 100.

The duration of cases of this type is indefinite and variable. In my longest case, a boy of ten, localized râles persisted for eight months, and after fourteen months' dulness was still present. In several instances the signs cleared up in a few days. It is not infrequent for the cough and râles to last for six weeks, and dulness with an occasional crackle as much longer.

Diagnosis depends upon the recognition of a localized infection of the lung, physically characterized by slight dulness and numerous moist râles, without frank consolidation, running a mild but protracted course. It may be differentiated from lobar pneumonia by the milder but more persistent course, the low fever, the lack of sudden onset and critical termination and especially by the absence of frank consolidation. Bronchopneumonia of the ordinary sort is usually secondary to other diseases, is commonest in children, is apt to be more severe and is typically bilateral in its distribution. Bronchitis is seldom persistently limited to one lobe, will rarely be accompanied by marked leucocytosis, and will not show dulness to percussion nor changes in the shadow cast by the lung parenchyma on the x-ray plate.

The question of tuberculosis naturally often arises in these cases, particularly when cough, debility and perhaps some loss of weight have persisted for weeks. One of my first cases was recommended to a sanatorium for tuberculosis by one of our best specialists and was accepted by the admitting physician. I found only a burst of râles at one base, and advised delay in the institution of sanatorium treatment—a somewhat risky bit of advice. Under reasonable care her signs and symptoms promptly cleared up, but it was long before she recovered from the emotional shock of that dreaded word, "tuberculosis." It is best to delay the use of that word where symptoms have existed but a few weeks and the signs consist of dulness and a burst of râles at one base.

The prognosis is almost invariably good. In only one of my cases, a feeble old gentleman with advanced arteriosclerosis, was there a moment's anxiety as to the immediate outlook. The disease is usually very mild. Most cases will be confined to bed for at least a few days, some not at all, some will keep at work. It is, however, best not to state the probable duration. Even a strong young man, with slight symptoms and signs, may be incapacitated for weeks.

No form of treatment is likely to produce any astonishing immediate results. The patient should be confined to the bed as long as fever persists, with a reasonable margin of safety. Afebrile cases may be simply confined to the house. I have treated a number as office patients, and as hospital out-patients throughout. In reasonable weather they do best out-of-doors, but here, as in everything else, common-sense must temper enthusiasm. The writer does not believe that any acute pulmonary infection should be exposed regardless to the full rigors of a New England winter. Of course no drug will materially affect the pathologic process; yet sedatives like codeine and expectorants like ammonium chloride will harmlessly lessen the discomforts of a severe cough with scanty tenacious expectoration. In two cases autogenous vaccines were prepared from pneumococci isolated from the patients' sputa. One seemed to be benefited, but of course nothing can be inferred from such a limited experience.

What is the pathology of this condition? It is certainly an infection for it is accompanied by fever and by leucocytosis, and the general picture is obviously that of a bacterial disease. In the cases upon which I have notes, no careful bacterial examinations of the sputum have been made, but observations made in the course of preparing vaccines for two cases have shown a variety of organisms, always including pneumococci. It is distinctly possible that some were influenzal infections. Influenza bacilli were sought for in but one case, and they were not present in that one.

It is not bronchitis, since the presence of dulness, changes in sounds and fremitus, and above all, the x-ray evidence of increased density show involvement of the lung parenchyma. It is not lobar pneumonia, as there is never any evidence of extensive frank consolidation, nor does the clinical course of the disease correspond to that of this condition. Riesman's view that we are dealing with a lobular or catarrhal pneumonia is probably correct. The principal departure from the usual type is that it is confined to one lobe or to a portion of one lobe, and that it runs a milder and frequently a more protracted course.

In one or two cases the patient had cardiac decompensation and the pulmonary condition was apparently an infection of one of the edematous bases. The course, however, apart from the cardiac condition, was not dissimilar to the others except in severity.

In acute infections of the lungs we recognize certain conspicuous types, such as the ordinary forms of broncho- and lobar pneumonia, bron-

chitis and pleurisy. But we often meet with infections due perhaps to the same organisms, which we cannot classify under these headings. In the writer's opinion the class of cases to which this paper has reference constitutes a sufficiently definite type to deserve a pigeon-hole of its own.

[1] Riesman: Amer. Jour. of Medical Sciences, 1913, cxlvi, 313.

THE FIELD FOR LOCAL ANESTHESIA AND OF SPINAL ANESTHESIA IN GENITO-URINARY SURGERY.

BY ARTHUR HALLAM CROSBIE, M.D., BOSTON.

DURING my present service at the Boston Dispensary the importance of local anesthesia has been brought to my attention with such force that I feel that it is worth while to speak of some of its uses. Probably many others here are using it as much, but there may be many like myself who have hitherto neglected its use to the fullest extent in out-patient clinics.

The matter was especially brought to my notice by Dr. Rosenkrantz of Los Angeles who had just returned from three years' study and practice in Germany and Servia. He was shown several cases of epididymotomy that we had done for acute epididymitis. These cases had been done under ether either at the patients' homes or at a hospital. I was deploring the fact that we had many such cases that should be operated upon, but they could not go to a hospital nor could they have it done at home. He suggested doing the operation in the clinic under local anesthesia, although he had not seen it done. I felt that it was too much of an operation for an out-patient clinic. Very soon, however, I operated upon two cases of acute epididymitis, using a 2% solution of novocaine, to which had been added a small amount of adrenaline. The results were so good that now Dr. Augustus Riley and I do even the most acute cases

FIG. 1.—Infiltrating the cord.

FIG. 2.—The needle inserted into the inguinal canal.

FIG. 3.—Injecting the region about the globus major.

FIG. 4.—The line for circuminjecting the cord and the line of incision.

under it. We use from 20 to 30 c.c. of a .5% to 2% solution of novocaine to which are added from 3 to 6 drops of adrenal solution 1-1000. We use usually 1% novocaine as it seems to give just as good anesthesia as 2%, especially when used with adrenal solution.

The method we use is much the same as Braun, in his recent book on local anesthesia, advocates for any operation on the testes. The best syringe is a 10 c.c. glass syringe with a two-inch needle. The first step is to infiltrate the cord. This is done by grasping the cord, at the point where it emerges from the external ring, between the thumb and forefinger of the left hand. From 5 to 10 c.c. of solution is injected in all

directions into the cord in order to be sure to block all the nerves in the cord. It is well also to inject a little into the inguinal canal itself. This is done to get complete blocking. The needle is then pushed downward along the cord to the region of the globus major and a little more solution injected. The scrotum is then circum-injected, on the side to be operated on, all the way to the perineum. This injection is made where the scrotal skin merges with the skin of the thigh. Even though the operation be unilateral, Braun recommends anesthetizing the scrotal skin all the way around, the same as one would for a double operation. We have not found this necessary as we get complete anesthesia by injecting the one side. Finally, a little novocaine is injected into the skin along the line of incision. In order to get perfect anesthesia it is well to wait ten or fifteen minutes. With the anesthesia thus obtained any operation may be done on the scrotum or testicle without pain. We have found that patients having an epididymotomy done under this form of anesthesia are able to walk out after the operation in comparative comfort. Such patients report back to the clinic for dressings.

The above method is suitable for epididymotomies, resecting spermatoceles and hydroceles. It would work well for varicoceles, but we do not use it in the out-patient clinic because of the danger of local bleeding. A patient after a varicocele operation should remain in bed for a few days.

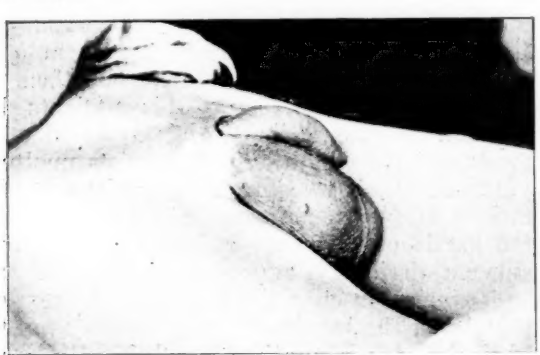


FIG. 5.—The line for injection in circumcision.

A modification of this form of anesthesia works excellently for circumcision. The method is much the same, a ring is infiltrated about the base of the penis close to the pubes. A little novocain is injected into the corpora cavernosa as well. This gives complete anesthesia of the whole penis, so that any operation, such as circumcision, cutting strictures of the anterior urethra, operations for phimosis and paraphimosis or even amputation of the penis can be done without pain. I find this method of especial advantage in doing circumcision, because in the old way of infiltrating the prepuce I was seldom able to get complete anesthesia and the infiltration rendered the parts worked upon very edematous, which was a great disadvantage.

For anesthetizing the urethra for cystoscopic work or cutting anterior strictures we have been using a 4% solution of alypin with very good results. We use as much as necessary to get complete anesthesia and have had no toxic symptoms from its use. It is injected into the urethra with an Ultzmann syringe and held in from five to ten minutes. For cutting anterior strictures some people use the alypin made up with a soluble lubricant, which is injected into the urethra with a urethral syringe. I can see no especial advantage to this method.

Braun recommends doing perineal section for prostatectomy and for external urethrotomies under local anesthesia, but most men in this country prefer ether or spinal anesthesia for such work.

Novocain is an excellent anesthetic for doing suprapubic cystotomies, especially in old people, to whom you prefer not to give ether. The method is very simple. With a ten c.c. syringe the skin, subcutaneous tissues, muscle and prevesical space are infiltrated with a 1% or 2% solution of novocain and suprarenin. After waiting the usual length of time for the anesthetic to take effect, an incision is made down to the bladder wall. It is well then to inject a little 2% novocain into the bladder wall itself. The bladder can then be opened and drained without pain, provided you do not make traction on the bladder wall or press upon it. Traction and pressure on the bladder wall cause pain, even after the use of novocaine.

The anesthetic of choice for prostatectomy, either suprapubic or perineal, especially in feeble old men is spinal. The solution of choice is tropococaine.

Spinal anesthesia when properly given should produce satisfactory anesthesia for from three quarters of an hour to an hour and a half. In using spinal anesthesia for patients that are put into the lithotomy position care must be taken not to put them up into position for fifteen or twenty minutes, on account of the danger of producing too high an anesthesia.

The advantages of spinal anesthesia in these cases are many. First and foremost stand the lack of shock due to nerve blocking and the lack of ill effects on the kidneys.

The genito-urinary surgeon more than any other surgeon has to deal constantly with kidneys that are below par. An old man with long standing prostatic obstruction and constantly over-distended bladder has kidneys which have been weakened and their excreting powers lessened by the back pressure. The surgeon has to conserve the ability which such kidneys have left and must seek to improve it as soon as possible.

Ether does irritate the kidneys and spinal anesthesia does not. That in itself is reason enough for its use. In many of these cases it is of the utmost advantage to push water into them at the earliest possible moment to the limit in order to stimulate the kidneys to secrete prop-

erly. After ether it frequently happens that there is nausea and vomiting for several hours and fluid has to be introduced under the pectoral muscles or else let the patient go for several hours without enough fluid, thereby inviting the kidneys to shut down and produce uremia. Using spinal anesthesia, water can be started at once, even during the operation. There is no doubt that many poor risks are now saved by using spinal anesthesia who would have been lost by the use of ether.

The disadvantages of spinal anesthesia are its toxic elements and the fact that it is sometimes difficult to use in neurotic highstrung people. The toxic dangers have been pretty well eliminated by the perfection of the drug used. High strung patients are often helped by injections of morphine given some time before the operation.

I have not undertaken to describe the method of giving spinal anesthesia, as it should be done by a specialist and is not a part of the surgeon's work.

There are many more genito-urinary operations that can be done under local anesthesia, in fact most all such operations can, although in kidney work it is not very satisfactory except where it is necessary only to open a perinephric abscess or something of that sort in a patient who is too sick for ether.

In this paper I have attempted to show especially what can be done with local anesthesia in a genito-urinary out-patient clinic.

Medical Progress.

REPORT OF PROGRESS IN MENTAL DISEASES.

(*Concluded from page 226.*)

PART II.

BY HENRY R. STEDMAN, M.D., BROOKLINE, MASS.

NERVOUS AND MENTAL DISTURBANCES FOLLOWING CASTRATION IN WOMEN.

FROM an analysis of 112 cases Gordon[11] concludes that (1) Removal of the reproductive organs in women causes disturbances in the domain of the nervous system. These disturbances are of a purely functional nature. (2) The disturbances are somatic and psychic. (3) The psychic manifestations, while individually they belong to any of the varieties of psychoneuroses, nevertheless in their ensemble do not constitute any of the well-established classical forms of psychasthenia. (4) True insanities are not observed. (5) The generally observed symptoms are: restlessness with a tendency to move from place to place; difficulty of self-control; dissatisfaction with all and everything; difficulty of finding contentment in one's own efforts; want of interest in all absorbing subjects and objects; indifference, indolence and pessimism. Sometimes there are outbreaks of anger with a tendency to attack. Among other symptoms may be mentioned: insomnia, gastro-intestinal disturbances of a functional nature, headache, vague pains or paresthesias, also occasionally glycosuria; tendency to obesity is also observed in some patients. (6) While the psychic manifestations are sometimes of a very disturbing nature, nevertheless they do not present the characteristics of genuine psychoses For example, indifference and want of interest in surroundings lack the depth of those of melancholia or of dementia. Restlessness, which is so frequently observed here, lacks the characteristic features of exaltation in the motor sphere observed in cases of mania. As mentioned above, while individual symptoms of his cases resembled those of psychoses, the entire picture of each lacked the depth and definiteness of any of the forms of insanity. Some of his patients had to be removed from their surroundings and isolated, not because they were insane in the proper sense of the term, but because of inconveniences caused by them to others. Besides, the subsequent histories of the last category of patients as well as of any other patient of his entire series proved at no time the existence or eventual development of true psychoses. On the other hand, it is striking that the morbid phenomena persist with remarkable obstinacy; at times they become more accentuated, at others some improvement is noticeable, but then it is only temporary. Some of his patients have been under observation during a period of ten years and the condition still persists unaltered. (7) Individuals who presented various manifestations of psychoneuroses before they fell into the hands of surgeons, had their psychic phenomena decidedly aggravated after the uteri and ovaries or only the ovaries were removed. (8) As in the removed organs healthy portions of tissue were invariably found, it is to be supposed that the removal of the latter is in some relation to the morbid phenomena observed after the operations. (9) The logical conclusion seems to be that one must be very cautious in advising operative procedures on the generative organs and the tendency should be to preserve as much as possible of any amount of normal tissue found in the uterus or ovaries. (10) No operation should be advised on healthy organs if a woman complains of vague disturbances.

NERVOUS AND MENTAL AFFECTIONS IN THE FIELD.

Weygant[12] says that, contrary to the practice under other conditions, the aim should be to hurry the patient away at once, stupefy him with a narcotic if necessary, and also use force if unavoidable; even a strait-jacket may be needed.

The main thing is to get him out of the battlefield environment at the earliest possible moment, and the less he remembers of the journey the better. There is no special war psychosis, but war is very liable to fan into flame a latent predisposition to epilepsy, hysteria, slight imbecility and manic-depressive or catatonic attacks, or a syphilitic brain or spinal cord trouble. Prompt removal of those affected is important not only for their own welfare but even more on the account of the effect on other soldiers. A kind of "mass psychosis" is liable to develop in a time of panic, such as occurred at Kirkilisse and Lule Burgas in recent years. He cites figures showing that psychoses developed in 0.54 per thousand of the German troops during the Franco-Prussian war; in 2.7 per thousand of the United States troops in the Cuban war, in 2.6 per thousand in the British during the Boer war; and in 2 per thousand in the Russian troops during the war with Japan, while the records show only 0.33 per thousand among the Bulgarian troops and also in the Servian troops, and 0.097 per thousand among the Grecian troops. He ascribes the difference between the Russian and the Balkan figures to the liquor-drinking among the Russians. He does not offer any explanation, however, for the large numbers among the German expedition corps in Southwest Africa, 4.95 per thousand; including cases of epilepsy and hysteria, 8.28 per thousand of the troops were thus affected.

MENTAL DISORDERS AND PERNICIOUS ANEMIA.

Barrett[13] has studied clinically the mental disorders of 11 cases of pernicious anemia, and in 9 of these a histologic study of the brain was made. The symptomatology of these cases showed considerable variety. Two were cases of epilepsy, 2 were not to be differentiated from dementia precox, 1 was a questionable manic-depressive psychosis, and 6 presented a characteristic picture of an asthenic state in which there developed a mental disorder of a paranoid type. It is to these paranoid conditions that this study is particularly devoted.

Brief accounts of 6 cases are given by Barrett. The first 2 of these showed a slight tendency toward delusional elaboration. In the remaining 4 the paranoid features were well developed. The cases, as a whole, have in common an irritability, and a suspiciousness which forms the ground on which develop the delusions of persecution. The content of the delusions is usually influenced by the somatic-neurologic symptoms and the situation in which the patient is placed as a result of these disturbances. In some instances there were auditory hallucinations to which the patient reacted with strong affect. In several cases there was confabulation, which suggested that seen in the Korsakow's syndrome. Comprehension and orientation were usually clear, except for rare episodes, in which they were slightly disturbed. In two instances the mood was slightly expansive. In a number of instances the course showed remission in the intensity of the physical conditions. Underlying the development of the mental condition in all but one of these cases was a hereditary predisposition. In several instances there was a number of occurrences of mental abnormalities or insanity among the ancestors. In all cases of pernicious anemia with mental disorders studied, hereditary factors were found in the greater number.

The histologic changes in cord and brain as a whole are not of a specific type, but rather those which occur in conditions of chronic intoxication and resemble those found in chronic alcoholism, namely, the occurrence of increased lipoid products in cells, glia overgrowth, vessel changes, miliary hemorrhages and intramedullary fibre degeneration. The similarity to a toxic type is further shown in the axonal type of reaction which was found in two instances, a change which has often been noticed in the Korsakow's symptom-complex and various forms of toxic neuritic disorders. As in toxic processes, the vessels are severely affected.

Clinically, Barrett points out there are features in these paranoid cases which resemble closely those seen in chronic and subacute toxic conditions, especially the chronic alcoholic delusional states. These are the occurrence of the suspiciousness and irritability, the development of the delusions of persecution, the auditory hallucinations and occasional memory impairment and confabulation.

INSOMNIA AND SUICIDE.

Under this title Pronger[14] discusses the influence that slight refractive errors have in causing many of the functional nerve troubles, so prevalent in these days. Among these, insomnia has naturally had a prominent place. Slight errors of refraction, although not causing any visual defect, are of great importance in that they give rise to sundry neuroses. Especially, says Pronger, should these slight degrees never be ignored in any case of insomnia, because some error is nearly always present in those cases not associated with organic disease, such as tumor, kidney troubles, and the like, or with persistent pain from any cause. Insomnia is not usually the only symptom, but is generally associated with attacks of great depression, and often with giddiness or headaches. A few illustrations are given by Pronger of what can be done for the relief of insomnia, and also of some of the difficulties that have to be surmounted, particularly the skepticism of the patient as to the possibility of glasses being of use for such a purpose, especially if the sight is good or an oculist has already been seen.

THYROID EXTRACT IN CERTAIN MENTAL DISORDERS.

For many years Goodall[15] has employed thyroid extract in cases of stupor and stupor with melancholia, or of confusional insanity—cases which have certain features in common with myxedematous cases, but until the last two years the failures were more numerous than the successes. He attributes many of those failures to the circumstance that he gave insufficient doses of thyroid. His recent experience entirely justifies those who have insisted on large doses if any benefit is to follow. Thyroid is not only beneficial in acute stupor, or acute dementia, and "confusional" states, but also at a later stage of these conditions and of cases of recent melancholia, when the patient has improved to a certain point and there remained. In these cases administration of thyroid has appeared to complete the process of recovery.

Eleven such patients were treated by this method. They were kept in bed during the whole course of treatment, usually in the open air, on liberal diet, and the temperature, pulse, and respiration were taken throughout twice daily. All had been mentally ill for months before the thyroid treatment was started. The amount of thyroid given varied from 25 to 50 grains a day for five to eight weeks. The pulse-rate was affected in the direction of increase very consistently, whereas the temperature and respiration were affected but slightly, or not at all. Gain of weight during the treatment occurred in two of eleven cases; one showed no change; in all the others a loss was noted, but after cessation of treatment weight was rapidly regained, and in eight instances there was ultimately a gain on the original weight. The results were highly satisfactory, since no less than six patients of eleven became well; and all the others except one, showed a definite improvement, and this one had been deranged for no less than three years when treatment was employed.

In eleven out of twelve cases of epileptic insanity treated with thyroid the number of fits was reduced. The patients were not on any other drug, but were kept in bed on ordinary diet, with in some cases, extras, such as milk and egg. A reduction of weight occurred in all except one. The observation as to the pulse, respiration, and temperature made in connection with the first series of cases apply also to this series. On the basis of these results Goodall kept certain of these patients on 5 grains of thyroid daily for a prolonged period; the patients were up as usual and on their usual diet. A substantial reduction in the number of fits occurred in many of these case, amounting in some to from 52% to 65%, as a result of a small daily dose of thyroid. No ill-effects were observed.

Lemel[16] is quite encouraged with the results of thyroid treatment in the twelve cases in which he has given it a thorough trial. These patients were all between 17 and 24. The improvement persisted for five years in one case, and then there was a return of the former condition. In the other cases the improvement has persisted to date, but the interval since has been shorter. In one case the interval is still too brief for estimation of the outcome.

HYOSCINE IN MENTAL DISORDERS.

Daniel[17] summarizes the important points regarding the use of scopolamine hydrobromide as follows: (1) The continued administration of scopolamine hydrobromide may give rise to characteristic symptoms of chronic poisoning. (2) Weak-minded epileptics appear to have a marked idiosyncrasy for the drug. (3) Careful watch should be kept on all patients taking hyoscine regularly, and undoubtedly the best test for any ill effects is the weighing machine. (4) For acute excitement there is no drug so reliable as hyoscine when given hypodermically, but the doses must not be repeated indefinitely. (5) Lastly, there is no doubt that life may be endangered by hyoscinism.

THE WET PACK IN THE TREATMENT OF INSOMNIA AND MENTAL DISORDERS.

Raynor[18] regards the following classes of cases as the most favorable for its therapeutic employment in asylums: (1) In acute delirious mania, of sthenic type, with continued insomnia. It constantly succeeds in producing sleep when narcotics have failed utterly; also, in mania of sthenic and active type. (2) In insomnia accompanying mental disorder, with associated toxic conditions, whether of melancholic or of maniacal type. Climacteric and gouty conditions, alcoholic and drug habit cases are specially benefited. He shows that its first effect is the production of a cold state, with shivering and a falling temperature. This is followed quickly by the stage of reaction, in which the temperature rises and there is profuse sweating due to dilatation of the cutaneous vessels, with subsequent sleep. There is probably considerable elimination of toxins in the sweat. He lays stres on the point that as soon as the temperature reaches the normal the coverings should be diminished, as it is not desirable that pyrexia should be produced, and he adds other practical points to be observed. This mode of treatment, which is certainly of great service in the treatment of some forms of mental disorder, of insomnia, and of many bodily disorders which are found in the insane as well as in the sane, he regards as especially advantageous for institutions for the insane. He adds that the vanished employment of wet packing in asylums [in England] is almost certainly due to its being classed as a form of restraint. The regulation of 1872 enforcing the record of wet packing was certainly not intended to produce this result, but only to check its abuse as a method of veiled mechanical re-

straint. The lunacy commission, he remarks, has been always most punctilious in avoiding any interference with legitimate therapeutical methods, yet the use of the dry and wet pack is still considered as a method of restraint in their revised regulations of 1913. These regulations demand still further consideration and it may be hoped that, whilst preventing the abuse of wet packing, they may be so framed as to encourage its employment as one of the most important and valuable means of treatment of the insane.

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Book Reviews.

Case Histories in Obstetrics. Groups of Cases Illustrating the Fundamental Problems Which Arise in Obstetrics. By Robert L. DeNormandie, A.B., M.D.; Assistant in Obstetrics, Harvard Medical School; Physician to Out-Patients, Boston Lying-in Hospital; Assistant in Gynecology, Boston Dispensary.

This, on the whole, very excellent volume is a good example of both the advantages and the disadvantages of the case history system of constructing a text-book or book of reference. The cases are given in great detail, and their detailed recital covers not merely the feature in the case which it is especially intended to illustrate, but the case as a whole in all its features. Each case thus assumes a strong verisimilitude to actual experience and carries many lessons beside that which is its especial function in the book. To one who knows the persistence with which incidental lessons often linger in the memory, this is a very valuable characteristic. The book reflects throughout the author's wide experience in direct personal contact with students. The simple lucid style and the wealth of practical detail should make it of great value, not only to the advanced student or inexperienced practitioner, but to all the many physicians who have been obliged to pick up their practical obstetrics after receiving nothing but the routine school training. Such men are usually for many years in a position to profit highly by such practical hints as those with which this book abounds. It is well arranged, the table of contents is excellent, the summaries of each subject are clear and practical, and though the index does not appear very full it should be easy of use as a work of reference when its possessor desires to look up a single subject, but considered as a work of reference it has the defects of its qualities. The method adopted necessarily makes the discussion of each subject discursive and complicated with irrelevant matter. With sufficient time to read and absorb the subject under review, as given in the cases and summary, the inexperienced practitioner will probably get a better knowledge of the points involved than from the briefer descriptions given in the routine text-books, but he will not get it so quickly nor can he expect to find all he wants at any one spot. The book as a whole furnishes an interesting and surprisingly practical picture of how a careful and thoroughly modern obstetrician conducts his work in all or most of its phases.

Local and Regional Anesthesia. With Chapters on Spinal, Epidural, Paravertebral, and Parasacral Analgesia, and on Other Applications of Local and Regional Anesthesia to the Surgery of the Eye, Ear, Nose and Throat, and to Dental Practice. By Carroll W. Allen, M.D., Instructor in Clinical Surgery at the Tulane University of Louisiana, New Orleans; Lecturer and Instructor in Genito-Urinary and Rectal Diseases at the New Orleans Polyclinic; Visiting Surgeon to the Charity Hospital. With an Introduction by Rudolph Matas, M.D., Professor of General and Clinical Surgery at the Tulane University of Louisiana, New Orleans, etc. Illustrated. Philadelphia and London: W. B. Saunders Company. 1914.

This is a well-printed book of 600 pages covering every portion of the field of local anesthesia. Under this head, as is apparent from the title, Dr. Allen includes chapters on spinal and sacral anesthesia.

This is the book of an enthusiast, who has made much practical use of the methods he describes, and has covered the literature upon the subject in a most extraordinary manner. It is unfortunate indeed that this extensive bibliography is eliminated from the book, even for the excellent reason of avoiding undue bulk. The author has been successively a student, assistant and associate of that brilliant, untiring and original surgeon, Matas, of New Orleans, who nearly two decades ago planned and actually began a book on this subject. It will be somewhat of a surprise to a good many young surgeons to discover that Matas was one of the greatest and earliest investigators of local anesthesia in this country. His name has usually been associated with entirely different branches of surgery. His introduction is interesting and contains a brief summary of the various and unusual procedures which he carried out in those early years. Dr. Allen most enthusiastically credits his teacher with not a few of the great advances made in the early days of local anesthesia.

The Myth of the Birth of the Hero. By DR. OTTO RANK. Authorized translation by DR. T. ROBBINS, AND DR. SMITH ELY JELLIFFE. Nervous and Mental Disease Monographs, No. 18. New York: Nervous and Mental Disease Publishing Company. 1914.

This latest addition to the excellent series of monographs on nervous and mental diseases is a translation of a monograph by one of the followers of Freud, applying his view of the domination of the sexual instinct in infantile psychology, to the development of the myths of various nations. Though unconvincing because of the typical Freudian overuse of symbolism to force everything in the myths into a preconceived idea of the rôle of certain elements in psychological factors, the book is interesting, and the translation reads smoothly.

Psychopathology of Everyday Life. By PROF. SIGMUND FREUD, LL.D. Authorized translation by A. A. Brill. New York: The MacMillan Company. 1914.

The psychologic theories of Freud are extremely interesting to physicians who have to deal with the neuroses, mental diseases, or psychology, though many able men are unable to accept parts of his theories, notably the concept of a psychologic censor, and the all-controlling influence of the sexual instinct in psychology to the exclusion of other instincts, and psychologic states. The extension of these theories to the psychology of everyday life is still more questionable than their application to neurotic symptoms and mental states, but is praiseworthy as showing a widening field of inquiry in physicians who are concerned in the study of the neuroses. In spite of these reservations which the reviewer feels he must make for the guidance of his readers, this book throws much light upon many of the phenomena of everyday mental actions of the normal, as well as of the pathologic mind, and shows exceedingly well how the mental processes of pathologic mental states follow the lines of normal psychologic processes. The translation seems well done, and for the most part reads smoothly.

The Unconscious. The Fundamentals of Human Personality, Normal and Abnormal. By MORTON PRINCE, M.D., LL.D. Professor (emeritus) of Diseases of the Nervous System, Tufts College Medical School; Consulting Physician to the Boston City Hospital. New York: The MacMillan Company. 1914.

Dr. Prince has long been known for his numerous and careful studies of abnormal psychology, and this book consists mostly of selected lectures from courses on that subject delivered at the Tufts College Medical School and at the University of California in 1910, though these have had incorporated in them a large amount of new material, and the subject has been treated more in detail than was practical before students. The book is clearly written, and anyone, even without any special knowledge of psychology or abnormal psychology, should have no difficulty in following the writer in the development of his ideas.

The first lectures take up the theory of memory, and certain of the phenomena connected with it, with illustrations drawn from both the normal and the abnormal. A lecture on neurograms then pleads for a physical basis in the brain as a foundation for memory. The various phenomena of the unconscious and of subconsciousness are then very clearly set forth. The remaining lectures develop the writer's views of the relation of unconscious ideas to the emotions, instincts, sentiments and conflicts, and the origin through these of the abnormal psychologic phenomena which we classify as the various forms of functional nervous disease.

Whether one is ready to accept in full the conclusions of the author as to the origin of these abnormal psychologic states will depend largely upon the reader's knowledge of these states, and of psychologic phenomena, influenced no doubt by the theories held; but no student of these important and exceedingly complicated phenomena can fail to profit from the reading of this book, and rise from it with a clearer idea of the problems to be solved in this field. Those who are not special students of this subject also cannot fail to gain something from its perusal and to be more able to estimate at their true value the articles so often published in popular magazines on certain aspects of these phenomena.

It may not be amiss to call attention to a couple of misprints, the first in the second footnote on page 426, where Dr. Cannon's article should have been credited to the *American Journal of the Medical Sciences,* and another in the last line of the text on page 443, where "cardiac and respiratory disease" should evidently read "distress."

The Clinics of John B. Murphy, M.D. At Mercy Hospital, Chicago. December, 1914. Published bi-monthly. Philadelphia and London: W. B. Saunders Company.

This number contains, besides an index to Volume III, a description of a series of interesting surgical cases; a paper by Dr. C. L. Mix on Hodgkin's Disease; Fracture-Dislocation of the Spine at the Level of the Twelfth Dorsal Vertebra; Appendicitis; Cholecystitis; Sarcoma of Tibia; Arthroplasty for Bony Ankylosis of the Wrists; Tuberculous Epididymitis; Perforating Duodenal Ulcer; Retroperitoneal Sarcoma. This December number does not seem quite up to the previous general average.

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THE BLOOD-PRESSURE DURING PREGNANCY.

IN the *Journal of the American Medical Association* for January 30 is published the notable contribution to this subject presented by Dr. Franklin S. Newell at the fifth annual meeting of the American Association for the Study and Prevention of Infant Mortality held here in November, which is based on observations on 450 cases from the records of the committee in charge of the pregnancy work carried on by the Women's Municipal League of Boston. He concludes, very properly, that the significance of the rise in blood-pressure noted in a considerable number of women during gestation can be ascertained only by a frequent study of the blood-pressure in a large number of cases, and, in order that definite knowledge on this whole subject may be attained, it is certainly highly desirable that such studies on a large scale should be made. In this series of cases 421 of the 450 patients showed a blood-pressure which at no time was either below 90 or above 130; in other words, these 421 patients showed what can be properly classed as absolutely normal pressure. Of the 421, 78 at some time during the pregnancy showed a pressure slightly below the normal, ranging somewhere about 90 and 100. In none of these patients, however, was the low blood-pressure persistent, it being observed only on one or two examinations, and in no instance did any uncomfortable symptoms afterward develop in labor which were referable to the low pressure; indicating, therefore, that a temporary low blood-pressure is of no significance during pregnancy. If the pressure remains persistently under 100 it is regarded as fair to assume that the patient's general condition is below par, and steps should be taken to improve it. If the pressure is over 130 the patient should be kept under close observation, even in the absence of other symptoms, and a rising pressure should always receive the most careful attention, as possibly being the initial symptom of an impending toxemia. In the 450 cases the examination of the urine showed albumin persistently or temporarily present in fifty patients. Of these, eleven showed also a blood-pressure of over 130, and every case of toxemia in the series, with the exception of one in which post-partum eclampsia developed in spite of a normal pressure, every case of toxemia occurred among these patients.

Among the conclusions of Newell are the following: In certain cases a rise in blood-pressure was followed by the appearance of albumin in the urine, a combination which has been shown to be a definite indication of the development of toxemia. In only one instance, however, did convulsions occur, the other cases yielding to treatment. Thirty-nine cases showed traces of albumin in the urine, but no change in the blood-pressure. As the urine was not obtained by catheter, the source of the albumin is unknown, but in the majority of the cases it was probably due to contamination of the urine by leucorrheal discharge. To judge from these cases, the presence of a slight amount of albumin, if not accompanied by a rise in blood-pressure, is negligible. All the eleven cases, however, which showed albuminuria with a high blood-pressure were presumably more or less toxemic. Five patients showed a pressure of 140, or over, throughout the period during which they were under observation, but only one of these developed albuminuria at any time during the pregnancy; which would tend to prove that persist-

ent high blood-pressure, in the absence of other signs, is not necessarily a dangerous symptom. Still, it should always arouse suspicion and call for increased watchfulness, whereas, as was shown in other cases in the series, a rise in blood-pressure from a low point is not infrequently followed by the appearance of albumin and the development of symptoms of toxemia, and is more significant than a high pressure throughout. A pressure of 150 has been commonly regarded as the danger line, but a persistent rise of the pressure from a low point, even though it may never reach this arbitrary danger point, calls for most careful attention.

Of great interest in connection with this report is the experience of Dr. D. J. Evans of Montreal, as recorded in a paper on "High Blood-Pressure in the Toxemias of Pregnancy," read before the American Therapeutic Society at its annual meeting in 1912. Evans's material consisted of thirty-eight cases of actual toxemia in which pregnancy was complicated with eclampsia, albuminuria and vomiting of a toxic type, and in twelve of the series the condition was so severe as to call for the induction of premature labor. In eight cases eclamptic convulsions occurred, and among these the highest blood-pressure was 200 and the lowest 140. In most of the cases the pressure was from 170 to 190 immediately before the convulsions. One of the patients had three convulsions, though her blood-pressure did not rise above 150 except at the actual time of a convulsion. Of two patients whose pressure was 200, one had five convulsions, and the other eighteen. There were four cases of severe vomiting; two early in the pregnancy and two near term. In the latter the blood-pressure was 140 in one, and 125 in the other, and in both instances labor was natural. Of the former, one patient, whose blood-pressure was never above 125, recovered from her vomiting and went to term; while in the other case abortion occurred at the sixteenth week and the patient died ten days later. This case was of special interest, as the patient's blood-pressure, usually about 100, never rose above 110; yet she developed retinal hemorrhage, in addition to other signs of grave toxemia. Of the remaining 26 cases, all had albuminuria with toxic symptoms of more or less marked severity. Seven had a blood-pressure of 160, or over; two of them as high as 180. In twelve the pressure was 140, or under, the lowest record being 120.

As a result of his experience Evans reaches the conclusion that the blood-pressure record is of little value as indicating the degree of toxemia present in cases of severe vomiting, and that further observation would demonstrate that in this class of cases the pressure falls below normal. He has been surprised at the comparatively low reading found in many instances where the symptoms indicated the existence of a very considerable degree of toxemia. In three of his series the induction of labor was imperative although the blood-pressure was 150, or under, while in four cases with a pressure exceeding 150 the toxic symptoms were so slight that the patients were permitted to go to term; when their labors were entirely normal. He is inclined to consider the danger limit as 160, and advises that in cases where, in spite of treatment, the toxic symptoms do not yield and the blood-pressure is maintained at or above this figure, pregnancy should be interrupted. In cases of pregnancy with high blood-pressure without toxic symptoms, a number of which he has met with, he believes there is little occasion for anxiety; but in all cases with renal or hepatic insufficiency the blood-pressure should be carefully watched. A rising pressure, associated with other toxic symptoms, in these cases is indicative of danger. As was suggested in the beginning, there is unquestionably need of further and more extended observation and study regarding the significance of the various phases of the blood-pressure in pregnancy. Thus, in the two series of cases cited, the blood-pressure referred to is presumably the diastolic pressure, and no mention is made of the systolic pressure, which in other conditions has of late assumed a position of very considerable importance.

EUGENIC LEGISLATION.

IN spite of all the optimism of the eugenists it is obvious that, much as it might be desired on scientific grounds, the methods of the stock-farm are inapplicable to human beings. And besides, the study of heredity has convinced almost beyond a doubt that disease tendencies, particularly defects, are transmitted from and by ancestor to progeny; and that it is of far more importance to prevent transmission by this method than to attempt to build up synthet-

ically from "perfect" individuals finer and more ideal products.

The existence of veritable colonies of defectives in many States has persuaded quite a number of the legislative bodies to enact statutes permitting the sterilization under certain conditions and safeguards of the mentally and morally defective populations of public institutions, in the hope that in this way will propagation by these "species" be anticipated, and their line become extinct. The legality of this procedure has, naturally, been attacked—in the defective that it is an interference with the absolute right of person, and in the criminal that it is "cruel and inhuman punishment," and against the constitutional restriction in the eighth amendment. The legal phases of this question are many, and are open, and must be finally decided before this practice can have universal application.

It is not merely jurists or laymen who are opposed to sterilization. Many very prominent scientists have expressed opposition to this practice on the ground that it is unscientific. On the Mendelian elaboration an individual himself defective, when born from the union of a defective and a normal, may yet produce normal offspring, because the dominant determiners in him alone are active, while the recessive or defective ones are dormant or inactive. This is illustrated in hemophilia, where the recessive characteristic causative of the bleeding diathesis is rendered active only when transmitted through a female to her male offspring; and where the bleeder leaves no potent female this constitution is forever inactive, and is finally wiped out because of inactivity. To sterilize the bleeder would be to destroy normal males, as well as the offending females. Reversely, one of two normal mates may have within himself an ancestral recessive defect, dormant in him for the time, but which the union under certain conditions renders active in an offspring. This may give explanation to the presence of a defective in a normal or even otherwise highly developed family.

The opponents of sterilization contend that until something more definite is learned of the method of hereditary transmission, sterilization as a public welfare procedure is not justified. Sterilization can logically only, if at all, be carried out with the distinct mental reservation that there is to be a sacrificing of the lives-to-be of normals in this endeavor to anticipate the inception of defective lives-to-be. And the question naturally arises: do these future normal lives-to-be have present value enough for so radical a remedy?

A form of eugenics, negative also, to be sure, that is intended to affect the public in general, is that purposed through legislation requiring all who contemplate marriage to submit certificates of good health as conditions precedent to the issuance of marriage license. The determination and the responsibility for this momentous and often difficult question is thrown entirely on the shoulders of the physician, whether in his private or whether in his public capacity. In effect it is calling upon him to pass on the most organic question in society. His certificates of health will be policies of insurance of immensely greater significance than money risk insurance certificates. They will insure not only against the existence of present patent or present but latent diseases or defects in the contracting parties, but also against subsequent ones arising thereafter, because it will be difficult to determine a causation prior or subsequent to marriage. And yet in so far as venereal diseases are concerned—against which the largest element of this propaganda is aimed—this determination is comparatively simple, only in the very rare instances when the applicants would present themselves for examination during the acute or subacute stages. But how many latent gonorrheas escape detection even after the most painstaking examination and even in individuals who will not marry unless declared free from disease? Even recently active syphilis can be made to escape detection by the Wassermann reaction after a period of anti-syphilitic treatment, beside many instances in which the reaction is negative in clinically positive cases not under treatment. Incipient cases of tuberculosis often defy detection, even with the most advanced diagnostic measures, only to bloom out shortly thereafter. Positive cases of insanity will escape the examiner if examined during a lucid interval, or in active cases where the delusions and the like manifestations ars studiouly concealed. In epilepsy a sufficiently positive diagnosis can never be made between attacks except where the physical and mental deterioration is marked from very profound or very frequent attacks.

Even on the most liberal and on the very broadest construction, how can such a restriction to marriage affect individuals who are themselves admittedly fit, but who present definite taints in their immediate or remote ancestors, and who are

theoretically just as potent to transmit defect as if they themselves were affected? Legislation forbidding them marriage would fail utterly of enforcement because so extreme and because impracticable.

Before such legislation is unreservedly endorsed, physicians must consider that in every case where disease or defect would manifest themselves after marriage, either in the contracting parties or in their offspring, the examining physician would be held under the gravest suspicion—and the integrity and competence of the whole profession might fall into disrepute.

HOSPITAL QUIET ZONES.

AT the instance of the Women's Municipal League of Boston an ordinance for the establishment of quiet zones in the vicinity of hospitals was recently drawn up by the Boston Street Commissioners and submitted for approval to the Mayor. The text of the proposed ordinance was as follows:—

"Section 1. The Commissioner of Public Works is hereby authorized and required to conspicuously place and maintain at corners of intersecting streets, avenues, and places on which may be located a hospital or other institution for the care of the sick, a sign or signs displaying the words, 'Hospital Street; Unnecessary Noises Prohibited.'

"Sect. 2. On any street designated as a 'hospital street,' on which such a warning sign as described in the preceding section has been erected, or within one hundred yards of any hospital or other institution for the care of the sick, no person shall make unnecessary or unseemly noises, including the crying out of his wares by a vender or peddler; loud or boisterous speech or conversation by individuals or groups of individuals; the sounding or playing of musical instruments and the sounding of an automobile whistle or horn, other than a reed horn; and no driver of a horse-drawn vehicle shall drive his horse or horses at a speed faster than a walk.

"Sect. 3. Any person guilty of violating the provisions of this ordinance shall be fined not more than $20 for each offence.

"Sect. 4. This ordinance shall take effect sixty days after its passage."

At a hearing recently held before the commissioners in behalf of this ordinance many causes of disturbance to the sick in hospitals were enumerated by hospital administrators and other officers. The report of the commissioners to the Mayor regarding the ordinance comments as follows on these complaints and on possible methods of obviating them:—

"The noise of heavy teams rattling through hospital streets is the only one of these things complained of that the board could control. It could do this by making a rule that such teams should be kept out of hospital streets. To this, however, objection was made by team owners and shippers, and not without cause. To give this relief to some hospitals, teaming would have to be diverted from main thoroughfares, and this the transportation interests protest against. The board is of the opinion that so little relief can be given by diverting traffic, it is not worth while to attempt anything in this direction.

"Next to the noise made by heavy teams, that made by the excessive use of the automobile horn or whistle is the worst and the most complained of. It is difficult to say whether it is the statute that is at fault or whether it is the fault of the drivers of motor vehicles, who may be careless as to the use of the horn or indifferent to their surroundings. The automobile statute, it is true, requires operators of motor vehicles to sound a warning at intersections of streets, and they may be punished for not doing so. The same statute, however, undertakes to prohibit the excessive use of the warning signal. There have been many prosecutions for failure to sound the signal, while prosecutions for too much sounding of signals have been rare.

"It would seem that the requirements of the statute would be met if the operator confined his efforts in signalling while near a hospital to the reed horn, which is not so objectionable as some of the other horns in use. To meet this complaint the board has incorporated in the proposed ordinance a provision that only the reed horn shall be used by automobile operators in the vicinity of hospitals.

"In addition to the adoption of some such ordinance as the one proposed, great relief would be given to hospitals if the surrounding streets were paved with some noiseless material. Your Honor has already suggested that this be done. The board heartily concurs with you in this suggestion. With such pavement, and with the requirement that drivers of horse-drawn vehicles shall not drive their horses at a speed faster than a walk in front of hospitals, the sick in these institutions will get as much relief from disturbances in the highways as it is possible to give them.

"It is an unfortunate circumstance that so many of the largest hospitals are located in the busiest of the city's thoroughfares. The board believes, as do most of the good people who give so much of their time and effort to the relief of the sick, in public and private hospitals, that the mere placing of signs calling attention to the fact that the street is a 'hospital street' will

have powerful influence in reducing the noises complained of."

In view of this report and the representations of many persons interested in the passage of this project, it appears that although the original scheme for the establishment of quiet zones about hospitals must be considerably modified, some definite relief from present conditions may be hoped and expected from the provisions of the proposed bill.

THE LOCAL PUBLIC HEALTH OF SUMMER RESORTS.

IN another column of this issue of the JOURNAL we republish the report of a committee on village improvement appointed to deal with the conditions of local public health at a well known New England summer resort. This report illustrates admirably how this community met its responsibilities, so far as health is concerned.

The first outstanding feature of the report is the notable prevalence of typhoid fever, not only at York but at other similar resorts. The extent of this prevalence is not generally realized and it is desirable that recreation seekers should be intelligently instructed about so-called "vacation typhoid" or what used to be known as autumnal fever. This can be done only by freely publishing the truth concerning typhoid as of all other contagious diseases, a policy which, whenever pursued, has always been shown to be followed by good results.

The town of York is one of not a few summer resorts which has met its local problems of public health in a model manner; but there remain many others which could wisely and profitably take example by its lesson. The two essentials of the method by which this excellent result was accomplished were, first, the replacement of the old-fashioned, inadequate and clumsy board of health by a full time health officer; second, the voting of an adequate appropriation thoroughly to carry out the needed reform. Although in this instance the annual appropriation amounted to only $1.00 per capita, that sum, as a matter of fact, is proportionally greater than that which any other American city spends directly for public health. Similar methods and a proportionate appropriation in every American city and town might well be expected to accomplish equally creditable results. No community, whether that of a health resort or of an agricultural or industrial center, can longer afford to depend upon nature and luck for a clean bill of health, but must rely rather on the intelligence and efficiency of its local public health officers.

MEDICAL NOTES

ENDOWMENT FUND FOR MEDICAL RESEARCH.—Report from Minneapolis on February 9, states that the Drs. Mayo of Rochester, Minn., have decided to establish a $1,000,000 foundation for medical research, to be placed under certain restrictions in the hands of a board of regents in the University of Minnesota. It is planned that the interest of this fund shall be used annually for research by graduate medical students of the University. At a meeting of the faculty of the University of Minnesota Medical School on February 8, this project was approved and has been referred to the advisory board.

UNITED STATES DEATH RATE IN 1913.—A report issued by the United States Census Bureau on February 8, shows that in 1913 the death rate of the United States was 14.1 per thousand of the estimated population in the registration area, as compared with 13.9 per thousand in 1912. The total number of deaths in the registration area, which contains about two-thirds of the national population was 890,948.

"Washington State showed the lowest rate, being 8.5 per 1000, while New Hampshire's was the highest with 17.1 per 1000. The rate in Massachusetts was 15. The lowest rate shown in 1913 by any of the fifty registration cities with populations of 100,000 or over in 1910, was that of Seattle, which was 8.4, while Memphis showed the highest with 20.8. Boston's rate was 16.4; Cambridge, 13.5; Fall River 17.2; Lowell, 15.9; Worcester, 15.8. The average age at death for both sexes, from all causes combined was 39.8; for males alone 39.2, for females, 40.6. Nearly 18 per cent. of all deaths were of infants under one year of age, and more than 25 per cent. were of children under five years.

"The death rate from tuberculosis declined from 149.5 per 100,000 population in 1912, to 147.6 in 1913. The rate from cancer rose from 63 per 100,000 in 1900 to 78.9 in 1913. The number of suicides was 9998, the rate being 15.8 per 100,000, compared with 16 in 1912."

TUBERCULOSIS AMONG WORKINGMEN.—A new campaign for closer co-operation with labor unions and other groups of workingmen is announced by The National Association for the Study and Prevention of Tuberculosis.

A committee has been appointed with Dr. Theodore B. Sachs, President of the Chicago Tuberculosis Institute, as chairman, to formulate plans for immediate and future action. Other members of the committee are: Dr. William Charles White, Medical Director of the Tuberculosis League of Pittsburgh, and Dr. David R. Lyman, Superintendent of the Gaylord Farm Sanatorium, Wallingford, Conn.

As the first step in the campaign, a special health bulletin has been prepared for the labor papers, and will be sent out monthly in coöperation with members of the International Labor Press Association. A second step in the plan is an investigation into the various special experiments of co-operation between workingmen and the anti-tuberculosis movement that have been carried on in this country. Such work as that of the tuberculosis relief associations in Hartford, New Haven, Meriden, and other Connecticut cities; the Trades Union Sections of the Buffalo and Newark Anti-Tuberculosis Associations; the work of the Factory Committee of the Chicago Tuberculosis Institute; the Tuberculosis Pavilion of the Albany Federation of Labor; the "Overlook Plan" of Massachusetts; and other similar efforts are being studied and reported upon. These reports will be made the basis for recommendations and further study in industrial communities throughout the country.

NEW YORK CITY'S DEATH RATE CONTINUES LOW.—The mortality noted during the past week was remarkable for the low rate recorded. There were 1,460 deaths reported as against 1,628 deaths during the corresponding week in 1914, a decrease in the absolute figures of 168 deaths, and if the increase in population be taken into consideration, a relative decrease of 236 deaths.

Every prominent cause of death showed a decreased mortality, especially measles, diphtheria and croup, scarlet fever, whooping cough, typhoid fever, diarrheal diseases under five years of age, organic heart diseases, acute diseases of the respiratory organs, influenza, tuberculosis of all organs, Bright's disease and nephritis, and violence.

The greatest decrease in mortality was shown in the number of deaths reported from organic heart diseases, the pneumonias, and the deaths from accident. At all age groups, with the exception of infants under one year of age, the mortality was lower than in the corresponding week of 1914.

The death rate for the first five weeks of this year was 14.08 per 1000 of the population as against a rate for the corresponding period of 14.75, a decrease of .67 of a point.

EUGENICS AND MARRIAGE IN WISCONSIN.—Report from Madison, Wisc., on February 6, states that during the year 1914, the first year of the operation of the new eugenics marriage law, only 13,300 marriages were recorded in that state as against 17,332 during 1913. If the quality of these marriages is demonstrated to have been improved, the eugenic law may be considered to have fulfilled its object.

CASE OF LEPROSY IN CHICAGO.—Report from Chicago states that a case of leprosy was discovered in that city on February 5 in the person of a recent Italian immigrant working as a night watchman. The patient has been deported.

EPIZOÖTIC OF FOOT AND MOUTH DISEASE.—On February 5 a dozen new cases of foot and mouth disease were discovered in the local stockyards at Cincinnati, Ohio, which were thereupon quarantined. These cattle had been shipped from Indianapolis. As a result of this discovery and of other recrudescence of infection in Chicago, Louisville, Buffalo, Pittsburgh and Jersey City, a new quarantine order was issued on February 6 by the department of agriculture modifying the quarantine regulations in these regions. On the same day the Bureau of Animal Industry announced that the total loss from the present epizoötic amounts to $3,399,110.

Twenty states and the District of Columbia have been more or less affected since last October. By January 31 the work of checking the disease was practically completed in all but seven states and further progress is continually being made. There have been slaughtered 46,268 cattle, 47,735 swine, 7,151 sheep and 22 goats.

The cost of the epizoötic in other states has been: Illinois, $1,338,854.18; Pennsylvania, $750,000; New York, $293,224; Rhode Island, $47,084.50; Connecticut, $35,787.10.

In Massachusetts the cost thus far has been $72,425, and an appropriation of $100,000 has been asked of the General Court to meet this and further liabilities. Statistics show that in Massachusetts the disease has appeared in 32 towns and 794 herds. The total appraisal of animals was $119,050 and of property destroyed $25,000, of both of which the State pays one-half and the federal government one-half. Several new cases of the disease were discovered on February 8 at Waltham, Mass., and on February 9 at Arlington, Mass. In both places quarantine has been reëstablished.

EUROPEAN WAR NOTES.—Report from Vienna on February 4 by way of Amsterdam and London states that small-pox is at present epidemic in the Austrian capital but the number of cases is not stated.

In an address before the Surgical Society of Paris on February 6, Dr. Truffier is reported to have said that of the 14,000 surgeons in the French Army, 6,500 are now at the front. Up to the close of December 93 surgeons had been killed, 260 wounded, 440 were missing and 155 had been mentioned in orders for gallantry on the field of battle.

The Constantinople Chapter of the American Red Cross, after a recent conference with Dr.

Suleman Nouman, inspector general of the Turkish Military Sanitary Service, has sent to the Ottoman war department a list of American Missionary Hospitals in Asia Minor, having a total of approximately 1000 available beds. It is intended that these hospitals shall be used in meeting war emergencies in caring for the wounded of all nations.

Of the 15 institutions listed, two are the French and British hospitals in Constantinople, now under the American Red Cross. On the others, 10 are hospitals connected with mission stations of the American Board while one conducted under an independent board of trustees is officered by men formerly connected with the American Board.

The Turkish Ministry of War has been asked to furnish certain supplies—drugs, absorbent cotton, oil, coal, etc.—for the British and French hospitals in Constantinople, but nothing is said about the furnishings for the hospitals in the interior.

Prior to the outbreak of the war the total number of physicians in Europe was approximately 200,000, of whom there were 48,000 in Great Britain, 32,000 in France, 26,000 in Germany, 24,000 in Italy, 20,000 in Russia, 13,000 in Austria, 12,000 in Belgium and 8,000 in Spain. The proportion of physicians to population is much greater in Great Britain than in any other country, but it is highest of all cities in Brussels, where there is one to every 400 inhabitants.

Three more American surgeons have recently left this country for field service in Europe. Dr. Earl B. Downer of Lansing, Mich., will go to the first American Red Cross hospital unit at Belgrade; Dr. James E. Stowers of Kansas City, and Dr. E. L. Gilchrist of Gainsville, Texas, to the American Red Cross hospital at Paignton, England.

Report from Vienna by way of Washington, D. C., on February 8 states that the Red Cross badge of honor of the second class has been conferred upon Drs. MacDonald, Jewett and Miller of the American Red Cross hospital at Budapest. Report from Vienna by way of London on February 9 states that Surgeon General Philip Peck, chief of the Austrian Army Medical Corps, has died of typhus fever contracted during an inspection trip to the camps of the Russian prisoners in Austria.

A recent correspondent of the *British Medical Journal* who has been in charge of an ambulance in France, has investigated some of the psychical consequences of experience on the battlefield and in the trenches. "Neurotic subjects, as one would expect," he says, "react in a most striking fashion to the shock of explosions in their immediate vicinity. Some develop a tendency to somnambulism and are met wandering about the premises with terror and anxiety depicted on their faces in anxious search of their regiments. Short of somnambulism the dread of losing contact with their fellows seems to be felt with extreme frequency, and horror of isolation constitutes the commonest nightmare of men in the first fighting line. They dream that they are wandering through endless trenches as complicated as an artificial maze, or are picking their way through lonesome forests whence all but they have fled. The slightest noise during sleep calls up visions of exploding shells or the tramp of armed men, throwing them into a frenzy of shouting terror, to the indignation of their resting fellows. Oddly enough, these men are as brave as the rest in face of real danger. Another common night terror is the dream of a sudden call to arms and the inability to find some indispensable article of attire or combat, a conception productive of intense mental agony. Live shells naturally occupy a large share of subconscious attention, and an exasperating nightmare is the discovery in one's bed of a shell ready and willing to burst, associated with the usual nightmare incapacity to execute the necessary movements to get rid of it. Several men have had dreams centering round the inability to withdraw the bayonet from the enemy's body when urgently required for self-defence. Numerous instances of "traumatic hysteria" are met with in which men suddenly roused from deep sleep by explosions, develop the characteristic paralyses and disturbances of sensation. In one case there was marked limitation of the field of vision and inability to connect letters into words; the man could read the letters, but could not pronounce the word when spelled nor write the word when pronounced. Insomnia and more or less troublesome restlessness are also common consequences of the strain on the nervous system of actual warfare."

On February 12 the total of the New York Belgian Relief Fund amounted to $918,016.98; the New York Red Cross Fund to $457,583.86; the American Jewish Relief Fund to $458,792.05; the American Ambulance Hospital Fund to $325,929.86; and the Committee of Mercy Fund to $117,904.42.

On February 13 the total of the New England Belgian Relief Fund amounted to $197,573.77; Massachusetts Red Cross Fund to $109,723.12; and the American Polish Relief Fund to $20,582.77.

BOSTON AND NEW ENGLAND.

DEDICATION OF THE CHAPIN MEMORIAL BUILDING.—On Thursday of last week, February 11, the new Frederick Wilcox Chapin Memorial Building of the Springfield (Mass.) Hospital was formally dedicated with appropriate exercises. A eulogy of Dr. Chapin was pronounced by Dr. Charles P. Hooker. The building was presented by Mr. George D. Pratt and accepted in behalf of the trustees by Col. Stanhope E.

Blunt. The building is given in memory of the late Dr. Chapin of Springfield by some of his many friends.

SOCIAL SERVICE AT THE MASSACHUSETTS GENERAL HOSPITAL.—On Tuesday of last week, February 9, the annual meeting of the Social Service Department of the Massachusetts General Hospital was held in the out-patient department under the chairmanship of Dr. Richard C. Cabot. Dr. Frederick A. Washburn spoke on "Advantages and Limitations of Social Service from the Point of View of an Administrator"; Dr. Hugh Cabot on "Hospital Social Service as a Laboratory of Democracy," and Dr. W. S. Wright on "Social Work as Seen by an Interne."

INFANT MORTALITY IN BOSTON.—At a recent meeting of the Board of Trustees of the Boston Milk and Baby Hygiene Association, it was reported that the total number of babies under the supervision of the Association in January, 1915, was 1815, an increase of nearly 500 over the corresponding month last year. The Association voted to support a bill (Senate No. 78) "To Protect the Public Health Against Danger from the Sale of Impure Milk and Cream."

During the past four years Boston has risen from seven to second rank among the ten largest cities in the United States with an infant mortality rate below 160. The present standing of these cities in regard to infant death rate per thousand births during the first year of life is as follows:

New York	94.6
Boston	103.4
St. Louis	103.4
Pittsburgh	115.2
Cleveland	116.4
Philadelphia	117.6
Buffalo	121.5
Detroit	122.4
Chicago	132.7
Baltimore	154.6

Mr. George R. Bedinger, director of the Boston Milk and Baby Hygiene Association, has recently made the following statement of the increase in work of the Association during this period:

"As the main agency doing directly preventive and educational work for babies, the Milk and Baby Hygiene Association during 1910 cared for 1870 babies in nine milk stations. In four years the increase has been over 100% in babies supervised and 33% in baby health stations.

"During 1914 in 12 milk stations the Association supervised the health of 4097 babies. Nurses' visits to the homes of the little babies rose from 38,805 in 1910 to 50,221. In 1910 there were 10,847 visits by mothers and babies to the 'well baby clinics' held weekly at the milk stations.

"In 1914 these visits to consult the physicians about the babies' feeding and care were 19,673."

In this connection it is of interest to note the recently published annual report by Miss Julia C. Lathrop, chief of the Federal Children's Bureau to the department of labor, on the investigation into infant mortality made by the Bureau at Johnstown, Pa. In the poorest sections of this city the infant mortality was 271 per thousand, more than five times that of the better residential districts.

"Babies whose fathers earned $10 a week or less, died at the rate of 256 per thousand, while those whose fathers earned $25 or more a week, died at the rate of 84 per thousand. Artificially fed babies died at a much more rapid rate than breast fed babies. Only 46.6 babies per thousand died under one year of age, when breast fed at least three months, as against 165.8 per thousand who died when fed with artificial foods. When mothers were employed a large part of the time in heavy work, babies died at a rapid rate. In one group of nineteen mothers whose babies all died, fifteen had been keeping lodgers. In houses where water had to be obtained from outside, the death rate was found to be 198 per thousand, as against 118 per thousand in houses where water was supplied by pipes."

Similar investigations are now being made by the Bureau at Lancaster, N. H., and Saginaw, Mich. In the preface to her report Miss Lathrop writes as follows of the general social importance of the subject of infant mortality:

"Infant mortality is a subject of profound social importance. The modern view has ceased to be fatalistic; infant mortality is now regarded as a preventable waste, injurious to survivors as well as destructive to infants, and cruelly increasing the burden of rearing a family. Sir Arthur Newsholme, the great English authority, has said, 'Infant mortality is the most sensitive index we possess of social welfare and of sanitary administration, especially under urban conditions.' Naturally, the United States has as yet no means of measuring the extent and significance of its infant mortality. If it were practicable, it would be illuminating to visit each one of the 2,500,000 children who, it is estimated, are born in this country yearly, and to take note of the varying social and economic conditions under which some 300,000 of them die and the others survive. As this is manifestly impossible, the nearest approach is to consider certain communities typical of the whole, and it is believed that in the course of a few years' study such data can be presented as will give the United States a fairly adequate measure of the conditions under which American-born infants survive or perish, and of the possibilities of modifying those conditions by local action."

The lowest infant mortality rate in the world is that of New Zealand which, in 1910, was only 51 and in 1913 only 38 per thousand births.

Massachusetts Medical Society.

Stated Meeting of the Council.

A stated meeting of the Council was held at the Boston Medical Library, February 3, 1915, at 12 o'clock, noon, the president being in the chair and the following seventy-one councilors present:

Barnstable.
E. E. Hawes.

Berkshire.
L. A. Jones.

Bristol North.
A. R. Crandell.
R. D. Dean.

Bristol South.
E. F. Cody.
J. H. Gifford.
H. G. Wilbur.

Essex North.
R. V. Baketel.
F. W. Snow.

Essex South
N. P. Breed.
W. G. Phippen.
H. E. Sears.

Franklin.
G. P. Twitchell.

Hampden.
T. L. Bacon.
J. M. Birnie.
G. D. Henderson.
M. B. Hodskins.

Middlesex South.
F. E. Bateman.
J. E. Cleaves.
C. H. Cook.
H. F. Curtis.
G. W. Gay.
A. A. Jackson.
C. E. Prior.
E. H. Stevens.
J. O. Tilton.

Norfolk.
G. G. Bulfinch.
P. W. Carr.
H. C. Ernst, *chairman.*
G. W. Kaan.
E. W. Finn.
G. H. Francis.
T. F. Greene.
T. J. Murphy.
W. H. Robinson.
B. E. Sibley.
C. F. Stack.

Norfolk South.
O. H. Howe.
A. E. Paine.
F. G. Wheatley.

Suffolk.
J. W. Bartol.
H. I. Bowditch.
E. M. Buckingham, *treas.*
W. L. Burrage, *sec'y.*
David Cheever.
E. A. Codman.
J. A. Cogan.
W. H. Devine.
C. Frothingham, Jr.
W. H. Grainger.
C. M. Green, *chairman.*
W. C. Howe.
H. T. Hutchins.
R. W. Lovett.
J. L. Morse.
A. G. Richardson.
M. A. Smith.
R. M. Smith.
G. B. Shattuck, *chairman.*
Beth Vincent, *chairman.*
H. F. Vickery.
C. F. Withington.

Worcester.
W. P. Bowers.
C. A. Church.
W. J. Delahanty.
Homer Gage.
David Harrower.
G. O. Ward.
L. F. Woodward.
S. B. Woodward.

Worcester North.
H. W. Page.

The minutes of the last meeting were read and accepted.

The president read an obituary of Councilor Harry Clifton Boutelle, who died January 24, 1915 (see Boston Medical and Surgical Journal, February 4, 1915, page 200.)

The reports of the committee appointed to consider the petitions of the following named Fellows for reinstatement in the Society were adopted, voting their restoration to the privileges of Fellowship provided they discharge all indebtedness within one month: A. W. Parsons, W. H. Coon, J. W. O'Connor, J. F. Moore. Petitions for reinstatement from the following were referred to committees: J. A. Ceconi, F. X. Mahoney, R. F. Burns, C. H. Phillips, E. O. Tabor, J. J. Sullivan.

The president nominated and the council elected the following delegates:

To National Legislative Committee and Council on Health and Public Instruction of the American Medical Association at Chicago, M. J. Rosenau. To Conference on Medical Education and Meeting of Association of American Medical Colleges at Chicago, H. C. Ernst.

Members of House of Delegates, American Medical Association, for two years:

Hugh Cabot, Boston, Alternate, F. B. Lund, Boston.
B. W. Paddock, Pittsfield, Alternate, E. F. Cody, New Bedford.

To Rhode Island Medical Society:
A. S. MacKnight, Fall River, W. H. Butler, Fall River.

To Connecticut State Medical Society:
A. L. Cooley, Chicopee Falls, G. Z. Goodell, Salem.

To Main Medical Association:
C. H. Bangs, Lynn; F. W. Snow, Newburyport.

To New Hampshire Medical Society:
G. H. Gray, Lynn; W. H. Merrill, Lawrence.

Dr. R. I. Lee was appointed to fill a vacancy in the Standing Committee on Public Health.

The treasurer's report was read by Dr. Buckingham and the report of the Auditing Committee by Dr. Blakely (see page 277).

Voted, To accept the reports.

The following report of the Committee on Membership and Finance concerning membership, was read by Dr. Green:

The Committee on Membership and Finance makes the following recommendations:

1. That the following named Fellows be allowed to retire, under the provisions of Chapter I, Section 5, of the by-laws:

Abbott, Stephen Wendell, of Lawrence.
Booth, Edward Chauncey, of Somerville.
Chipman, William Reginald, of Chelsea.
Driver, Stephen William, of Cambridge.
Gibbs, Locero Jackson, of Chicopee Falls.
Pillsbury, Warren Wilbur, of Newburyport.
Prescott, Charles Dudley, of New Bedford.
Robinson, Lucy Morton, of Brockton.
Sanborn, Edwin Aaron, of Somerville.
Stutson, William Peckham, of Cummington.
Tucker, Edward Tobey, of New Bedford.
White, Emory Lincoln, of Somerville.
Woods, George Lyman, of Springfield.

2. That the following named Fellows be allowed to resign, under the provisions of Chapter I, Section 7, of the by-laws:

Arms, Burdette Loomis, now of the University of Texas.

Bruce, Harold Milton, of Plymouth.

Dean, Charles Henry, now of Salisbury, Vt., formerly of Northampton.

Eaton, William Edward, Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Gaffney, Mary Evangeline, now at The Convent, Newport, R. I.

Karsner, Howard Thomas, now of Western Reserve School of Medicine, Cleveland, Ohio.

Parker, Edwin Monroe, now of Reed's Ferry, New Hampshire.

Robinson, Samuel, now at the Mayos' Clinic, Rochester, Minnesota.

Smith, Earl Moulton, of 248 E. Main St., Amsterdam, N. Y.

Wright, George Hermann, of New Milford, Conn.

3. That the following named Fellow be allowed to resign, as requested by the Committee on Ethics and Discipline:

Papoulacos, Panagiotis, of 176 Huntington Avenue, Boston.

4. That the following named Fellow be deprived of the privileges of Fellowship for non-payment of dues, under the provisions of Chapter I, Section 8, of the by-laws:

Brown, Joseph, formerly of Worcester, now of Des Moines, Iowa.

For the Committee on Membership and Finance,
CHARLES M. GREEN, *Chairman.*

Voted, To accept the report and adopt its recommendations.

Dr. Beth Vincent reported for the Committee of Arrangements and sketched the plans of his committee for the annual meeting. Two alternatives were outlined, one to have the meeting at the Copley-Plaza Hotel as last year, and the other to have most of the meetings in the Boston Medical Library and the dinner elsewhere. The committee favored the former plan at an estimated expense to the Society of $1,775, an itemized estimate being furnished. Dr. G. W. Gay spoke on a proposition which had been advanced at a previous meeting of the Council, namely, that those who attend an annual dinner of the society should defray all of the expense of the dinner. He favored such a plan in the interests of economy and to promote the affiliation between the BOSTON MEDICAL AND SURGICAL JOURNAL and the Society and made a motion to this effect. After considerable discussion the motion was put to a vote and lost.

Dr. G. B. Shattuck reported for the Committee on Publications and Scientific Papers that Dr. Theodore C. Janeway will be the Shattuck Lecturer in the year 1916.

The following report of the Committee on Membership and Finance, concerning finance, was read by Dr. Green:

The Committee on Membership and Finance makes the following recommendations:

1. That a dividend of $4000, from the balance remaining in the treasury on December 31, 1914, be apportioned among and paid to the district societies, in accordance with the provisions of Chapter VII, Section 3, of the by-laws.

2. That appropriations for Standing Committees for the financial year 1915 be made as follows:

For the Committee of Arrangements	$1775
For the Committee on Medical Education and Medical Diplomas	50
For the Committee on State and National Legislation	250
For the Committee on Public Health	75

3. That to make possible the continuance of the affiliation of this Society with the BOSTON MEDICAL AND SURGICAL JOURNAL, the Council appropriate for the year 1915 the sum of $9500, this sum to be reduced by such sum as may be raised by special subscription.

4. That the Advisory Committee representing the Massachusetts Medical Society on the Board of Management of the BOSTON MEDICAL AND SURGICAL JOURNAL be authorized by the Council to secure pledges towards the maintenance of the JOURNAL.

For the Committee on Membership and Finance,
CHARLES M. GREEN, *Chairman.*

After several questions by councilors had been answered by Dr. Green and the president it was,

Voted, To accept the report and adopt its several recommendations.

Dr. E. E. Hawes spoke on the desirability, from the standpoint of Fellows who live at a distance, of having the annual dinner in the middle of the day, because of the amount of time required to attend a dinner in the evening. No action taken.

Dr. Gay referred to a suggestion made in an editorial in the BOSTON MEDICAL AND SURGICAL JOURNAL of October 1, 1914, entitled "The Minister and the Doctor," to the effect that there might be coöperation between the Massachusetts Federation of Churches and the Massachusetts Medical Society to perfect a plan of joint action to better health conditions in the State. He read this extract from a letter written to the secretary by the Rev. Samuel C. Bushnell, chairman of the Committee on Philanthropies of the Federation, dated January 27, 1915:

"At a meeting of the Committee on Philanthropies of the Massachusetts Federation of Churches it was voted, this afternoon, to overture the Council of the Massachusetts Medical Society to see if some method of coöperation might not be devised whereby the doctors and ministers throughout the state might get together for the benefit of their local communities.

"The plan met with the heartiest approval of all present—six of our committee of seven, Hon. Mr. Luce of Somerville being absent. If your Council would appoint a committee to meet as many of our committee as could get together on the day chosen we could discuss the general question and possibly reach some decision which might appeal to both organizations."

The president said that the Federation of Churches was composed of representatives of practically all the religious denominations and he understood that the Committee on Philanthropies was ready to favor desirable legislation, as well as to work with a Committee from our Society. On motion by Dr. Gay it was,

Voted, That the Committee on Public Health of the Massachusetts Medical Society be hereby authorized to coöperate with the Committee on Philanthropies of the Massachusetts Federation of Churches in such activities, having for their object the improvement of sanitary and social conditions of this Commonwealth, as the said committee may think wise and proper.

DR. E. H. BRIGHAM presented the following memorandum concerning an early meeting place and the fourth president of the Society:

In 1783 the land now substantially covered by the Phillips Building on the north corner of Tremont Street and Hamilton Place was occupied by what was called the "Manufactory House," which belonged to the Commonwealth of Massachusetts and had been used as a barracks during the Revolution. On March 20, 1783, the General Court passed a resolve permitting the Academy of Arts and Sciences and the Massachusetts Medical Society to make use of and improve the room in the Manufactory House, which had for some time past been occupied for a school by Mr. Vinal.

On February 13, 1784, the General Court passed a resolve that Samuel Phillips, Jr., Caleb Davis and John Rowe be a committee to make sale of the Manufactory House with the land thereto belonging. In pursuance of this resolve the estate was sold and by deed dated March 24, 1784, conveyed by this committee to the Massachusetts Bank. (Registry of Deeds, Suffolk County.)

"At a meeting of the American Academy of Arts and Sciences at the University in Cambridge, November 13, 1782,

Voted: That the Hon. Cotton Tufts, Esq., Ebenezer Storer, Esq., and the Rev. Mr. Howard be a committee to join with a committee, in case one should be appointed for the purpose by the Medical Society at their next meeting, in procuring a convenient room in the Town of Boston, in which both societies may hold their respective meetings."

"At a meeting of the American Academy of Arts and Sciences, in the County Courthouse and by adjournment in the Manufactory House in Boston, May 27, 1783,—

Whereas, The General Court did by a Resolve dated (no date given) grant to the American Academy and the Medical Society the use of a room in the Manufactory House in Boston in which to hold their respective meetings during the pleasure of the Court; and whereas certain repairs are necessary in said room,

Voted: That the Hon. Cotton Tufts, Esq., Ebenezer Storer, Esq., and the Rev. Simeon Howard be a committee to join a committee of the Medical Society in making such repairs as they may judge necessary at the expense of the two societies equally; and in framing such regulations respecting the room as they may think proper and report at the next meeting."

"A Petition of Mons. John Mary requesting liberty to teach the French language in the room granted to this Academy and the Medical Society by the General Court was read, whereupon

Voted: That Ebenzer Storer, Esq., the Rev. Dr. Cooper and the Hon. Robert T. Paine, Esq., be a committee to join a committee of the Medical Society (in case one should be appointed) in considering and determining on said Petition. their doings to be valid 'til the further order of the Academy." (Records American Academy Arts and Sciences.)

Three meetings of the Academy were held in the "Manufactory House," December 31, 1783, January 20, and April 1, 1784.

The Hon. Cotton Tufts, Esq., mentioned is Dr. Cotton Tufts of Weymouth, a state senator, who was an original incorporator and second vice-president of the Massachusetts Medical Society, 1785-1787; and fourth president, 1787-1795; also an incorporator of the American Academy of Arts and Sciences.

His portrait, given to the Library by William Tufts Brigham, A.B., Harvard, 1862, of Honolulu Hawaii, is now in the Fifield Room of the Boston Medical Library and was shown to the Council by the librarian.

Dr. Gay addressed the Council on the need of better care for the inebriates of the State. He said that it had been suggested that non-criminal inebriates be given an indeterminate sentence to the Norfolk State Hospital, working through the out-patient department in Boston, rather than follow the present custom of committing them to the House of Correction at Long Island, as is the case in the County of Suffolk. The latter plan, while not being humane, was a very large expense to the county. He thought that the Society should work to forward this movement. The chairman said that the Committee on State and National Legislation was prepared to promote this proposition.

Adjourned at 1.20 p. m.

WALTER L. BURRAGE, *Secretary.*

MASSACHUSETTS MEDICAL SOCIETY.

TREASURER'S REPORT FOR THE YEAR 1914.

Mr. President and Fellows of the Society:

Your treasurer has to report the finances of the Society for the year 1914 as follows:

RECEIPTS.

Balance January 1, 1914		$11,990.74
Assessments paid to District Treasurer:		
Barnstable	$ 173.00	
Berkshire	353.00	
Bristol North	287.00	
Bristol South	616.00	
Essex North	774.00	
Essex South	991.00	
Franklin	173.00	
Hampden	979.00	
Hampshire	311.00	
Middlesex East	370.00	
Middlesex North	572.00	
Middlesex South	2,334.00	
Norfolk	2,047.00	
Norfolk South	255.00	
Plymouth	494.00	
Suffolk	3,156.00	
Worcester	1,235.00	
Worcester North	343.00	
		$ 15,463.00

Assessments to Treasurer		1,101.00
Assessments at annual meeting		285.00
Sale of dinner tickets		715.00
Interest on Massachusetts bonds		560.00
Interest on funds subject to check:		
New England Trust Co.	$181.19	
Old Colony Trust Co.	127.17	
		308.36
Interest on annuity policies of the Mass. Hospital Life Ins. Co.		867.86
Interest on Savings Bank deposits		164.58
Sale of copy of Directory		1.00
		$31,456.54

EXPENSES.

President's expense:		
Printing and postage	$ 12.65	
Traveling	11.68	
		$24.33
Secretary's expense:		
Record book	$ 1.25	
Printing and stamped envelopes	333.65	
Stenographers at Section meetings	70.00	
Engrossing	20.30	
Addressing programs	15.00	
Directories	12.00	
Incidentals	29.29	
		$481.49
Librarian's Expense:		
Index cards	$ 14.00	
Files	3.50	
Postage and expressage	142.05	
Printing and postal cards	56.50	
Typewriting	10.00	
		$226.05
Treasurer's expense:		
Printing and stamped envelopes	$152.17	
Stationery and account books.	15.15	
Clerical work	60.74	
Treasurer's bond	37.50	
Rent of box, Old Colony Trust Co.	10.00	
Incidentals	4.33	
		$279.89
Bank charges		1.00
District Treasurers' expense:		
Commissions	$773.15	
Postage, printing, etc.	229.51	
		$1,002.66
Supervisors' expense		24.88
Censors' expense		540.45
Shattuck lecture		200.00
Cotting lunch		286.05
*BOSTON MEDICAL AND SURGICAL JOURNAL		3,175.75
Delegates to American Medical Association and its committees		286.67
Rent		750.00
Salaries		1,700.00
Return of overpaid assessments less commission		26.60
Annual dividend		3,000.00
Committee on publications and Scientific Papers:		
Printing and Distributing		869.55

*It appears by bills presented by the JOURNAL in July and October, that up to that time $3,309 had been collected upon the guarantee subscriptions.

Committee on Ethics and Discipline:		
Mileage		$ 12.00
Committee on State and National Legislation:		
Legislative Bulletin	$ 10.00	
Stenographer	22.78	
Printing envelopes and stationery	25.50	
Incidentals	48.00	
		$106.28
Committee of Arrangements:		
Bond boxes	$ 1.80	
Printing and stamped envelopes	107.00	
Stationery	.58	
School supplies	2.55	
Badges	4.90	
Stereopticon	5.00	
Clerks	60.00	
Police	32.00	
Music	125.00	
The Copley-Plaza Hotel	3,053.75	
Cigars	77.61	
		$3,470.19
Committee of Chairman of the Committee of Arrangements and Chairmen of Sections:		
Mileage		7.22
Committee of Nine:		
Stenographer	$ 28.18	
Mileage	50.54	
		78.72
		$16,549.78
Balance January 1, 1915		$14,906.76
Balance January 1, 1914		11,990.74
Increase over last year.		$ 2,916.02

Against this increase must be set an indeterminate sum representing the amount still to be paid to the BOSTON MEDICAL AND SURGICAL JOURNAL.

The balance is distributed as follows:

Deposit in the New England Trust Co.	$7,242.63
Deposit in the Old Colony Trust Co.	7,697.13
	$14,939.76
Deduct checks still out	33.00
Balance called for	$14,906.76

The change in the deposit from the Bay State Trust Co. to the Old Colony Trust Co. is because of the consolidation of these two institutions.

PERMANENT INVESTMENTS.

Shattuck Fund:	
Annuity policy, Massachusetts Hospital Life Insurance Co.	$ 9,166.87
Phillips Fund:	
Massachusetts 3½ per cent. bond	10,000.00
Cotting Fund:	
Deposit in Roxbury Institution for Savings	1,000.00
Deposit in Provident Institution for Savings	1,000.00
Deposit in Suffolk Savings Bank	1,000.00
Permanent Fund:	
Annuity policy in Massachusetts Hospital Life Insurance Co.	11,253.30
Massachusetts 3½ per cent. bonds	6,000.00
Deposit in Franklin Savings Bank	1,074.48
	$40,494.65

There has been no change in these funds during the year.

EDWARD M. BUCKINGHAM, *Treasurer.*

Report of Auditing Committee.

The undersigned, a duly appointed committee, having examined the books of the Treasurer, find them correctly cast and properly vouched, and also that he has in his possession the securities called for.

David N. Blakely,
James Lincoln Huntington.

Boston, Feb. 1, 1915.

Obituary.

THOMAS BRYANT, F.R.C.S., M.Ch., M.D.

Mr. Thomas Bryant, who died in London, on Dec. 30, 1914, was born in Kennington on May 26, 1828, the son of a surgeon. He was educated at King's College, and in 1846 entered the Guy's Hospital Medical School. He qualified as M.R.C.S. in 1849 and as F.R.C.S. in 1853. In 1857 he was appointed assistant surgeon at Guy's Hospital, and in 1858 lecturer on clinical and in 1859 on operative surgery. In 1871 he became full surgeon at Guy's Hospital and in 1872 first published his famous text-book on the practice of surgery, a second edition of which appeared in 1876 and a third in 1879. This work was a monument in the progress of surgery since, prior to its time, there had been published but one other large system of surgery, that of Erichsen.

In 1875 Mr. Bryant was appointed lecturer on surgery at Guy's Hospital and continued active there in the practice of his profession until his retirement as consulting surgeon in 1888. In that same year he delivered the Hunterian Oration and in 1889 the Bradshaw Lecture. From 1891 to 1894 he was president of the Royal College of Surgeons of England and from 1891 to 1894 served as its representative on the general medical council. In 1896 he was appointed Sergeant Surgeon Extraordinary to Queen Victoria and subsequently became Surgeon in Ordinary to King Edward and King George. He was a member of the Medical Society of London, the Hunterian Society, the Clinical Society and the Royal Medical and Chirurgical Society. He had received honorary medical degrees from the Royal University in Ireland and the University of Dublin.

Mr. Bryant was married in 1862 and is survived by three daughters and four sons.

Mr. C. H. Golding-Bird, writing of Mr. Bryant in the *Lancet*, speaks as follows of the latter's personal characteristics:—

"A handsome man, of commanding presence, with a personality that impressed itself on others, genial, kindly, and always ready to lend an ear to any that sought his advice. Bryant was the friend of all who knew him, whether student, colleague, or patient. The student felt that in him he had a friend to whom he could go for advice at all times, and never fail to get his sympathy and help. To his dressers' mistakes he was lenient, and whilst he never overlooked anything nor hesitated to correct, he at the same time explained and instructed so as to avoid a repetition of a similar mischance. As a colleague he was valued by all, and though 'once upon a time' there arose a serious difference between himself and a colleague that even threatened the peace of the hospital, he met his quondam friend in the open court of the operating theatre at the instance of their other colleagues, and both men publicly shook hands and thus closed the incident forever. Beyond this nothing ever happened to disturb the harmony with which Bryant performed his public duties at Guy's Hospital; and those who knew him personally will always cherish the memory of him as of a true friend, a courteous gentleman, and if not exactly a pioneer, at any rate a splendid example of the British surgeon."

Miscellany.

THE HEALTH OF YORK.

A brief review of the situation at York, Maine, in regard to public health is not amiss at the opening of the new year. In the late summer and early autumn of the past year there were a number of cases of typhoid fever in York Harbor and the vicinity. While these cases were not enough in number and severity to constitute a serious epidemic, the mere presence of the disease in such a popular sea-side resort naturally gives rise to considerable alarm. York met the situation in the following way, which should serve as a model to any other town in similar circumstances. There was no attempt to conceal the fact of the existence of the disease and its extent, the authorities very properly feeling that the way to meet any danger was to face it in the open.

At a meeting of the Village Improvement Society, a committee was appointed to confer with the selectmen and the board of health. As the result of this conference, a town meeting was held late in September and money was voted to meet the cost of a sanitary survey of the town which was made by Professor Milton J. Rosenau of Harvard University. While nothing very startling was discovered, a situation was found which showed that there were conditions which might, and probably did, affect the public health. As a result of the report of Professor Rosenau, a town meeting was held at which it was voted to employ a health officer, and $2500 was voted for his salary and the expenses incidental to the work.

The town is to be congratulated upon the

selection of Mr. William Eustis Brown as its health officer. Mr. Brown has had a thorough training in sanitation and preventive medicine both at the Massachusetts Institute of Technology and at Harvard University. He is a graduate of the School for Health Officers and has had a varied and wide experience in sanitary work of all kinds, and is well qualified to carry on the work.

This step which York has taken at once places it in the forefront of progress as far as health is concerned. York has determined to safeguard its citizens and all strangers within its gates and give them the security of health that a well ordered sanitary department can furnish. Although blest with natural advantages of an unusual order and admirable location, a charming scenery both of sea and country, and a delightful climate, York is not going to depend upon nature and luck for a clean bill of health. It has been said that "public health is purchasable," the price is moderate and the action of York shows that she intends to enjoy the best attainable protection from disease. Such protection ranks far above any other advantage which a summer resort can enjoy. Many resorts have acted on the policy that a good climate, charm of location and beauty of scenery are sufficient inducements to attract the summer visitor; but nowadays people are more wary and wisely look for more than this before selecting a vacation playground. The visitor wants a clean bill of health for the resort he has chosen and is entitled to have one. York will now be able to furnish this assurance.

There may be some obscurity as to the duties of a health officer in a small town such as York. Cases of communicable disease may arise in any community. Typhoid fever lurks in almost every country district in the land, always ready to strike if the opportunity offers. Some of the 8000 people from various parts of our broad land who visit York annually may introduce infection. It will be one of the duties of the new health officer to ascertain the existence of infectious diseases and take immediate measures to prevent their spread. Cases of such diseases will be traced to their source and practical preventive measures will be applied without delay.

Furthermore, the health officer will examine the sources of water supplies and analyze them. He will inspect the milk supply, visit and examine dairies, see that cows are healthy, that the milk is gathered in a cleanly and safe manner. This is of great importance as disease is often spread through contaminated milk. A little advice as to dairy management is often of great advantage to the milk producer.

Other foods, such as oysters, clams, meat, lettuce, etc., will be inspected by the health officer in order to be sure that the dealers comply with the pure food laws. The health officer will also inspect markets, kitchens, provision shops and store rooms where food is handled and kept. He looks after nuisances, prevents pollution of the beaches, conducts a campaign against flies and mosquitoes, supervises the harvesting of ice and performs many other duties which are included in the art of hygienic living. He keeps the vital statistics in accordance with modern methods. With careful records he is able to compare the health of York with other communities and to determine whether the measures he is taking are effective; and to trace the progress of health and disease, of births and marriages, and other vital factors affecting every member of the community.

York must some time in the not distant future look forward to the installation of a sewage system. This work must not be undertaken hastily, and information must be collected which will be of service in providing a proper system. To collect such information and to study the local conditions will be a part of the duties of the health officer.

In connection with the position, a chemical and bacteriological laboratory will be equipped where analyses may be made. This laboratory also will be prepared to make blood tests in order to recognize early cases of typhoid fever, to examine throat cultures in order to diagnose diphtheria, and to generally assist the physicians in the early recognition of other infections and to ascertain the time when such cases may be released from quarantine so that they will not menace the community as bacillus carriers.

We may all feel more secure in the health of our families and particularly of our children now that such a work has been undertaken.

(Signed)

JOSEPH P. BRAGDON,
Chairman of Board of Selectmen.
WILLIE W. CUZNER, M.D.
Secretary of Board of Health.
W. T. COUNCILMAN, M.D.
Chairman of Committee of Village Improvement Society.

CINCHONA OR CHINCHONA

In the issue of the *Medical Press and Circular* for Jan. 20, a Dublin correspondent calls attention as follows to the spelling and history of the name Cinchona, or Chinchona, applied by Linnaeus to Peruvian bark.

"The new edition of the *British Pharmacopoeia* has, I fear, perpetuated the Linnaean spelling Cinchona. Linnaeus sought to honour the memory of the Countess de la Chinchon when in 1742, he named the natural order from which the chinchona bark is obtained Chinconacae. As the bark was usually put on the market in the condition of powder, it came to be known as the

'Countess's powder,' 'Jesuit's powder,' and the 'English remedy,' or 'Talbot's Wonderful Secret for Curing Agues.' On the proposal to alter the spelling by the insertion of the letter h after the initial letter, Murray writes: 'The accepted form is too deeply rooted in botanical and chemical nomenclature to make this expedient.' Withal we should try to perpetuate the name of the illustrious Chinchon family with the introduction of this one of our most precious drugs. The title illustrious is justly borne by the family of the beautiful Lady Ana de Osorio, whose ancestor Ramiro, King of Galicia in 843, is said, by Spanish chroniclers, to have had Saint James as a companion-in-arms at his great victory over the Moors at Clarijo, in which the apostle gave the battle cry of 'Santiago' to Spain. The Lady Ana was born in 1599, and at 16 years old was married to Don Luis de Velasco, who in 1617 became Marquis of Salinas. Two years later the Lady Ana, still young and very beautiful, became both a widow and an orphan. In the autumn of 1621 she married Don Luis Geronimo Fernandez de Cabrera y Robadilla, fourth Count of Chinchon, a descendant of a very ancient family of Catalonia. Soon after their marriage they entertained at Sagovia, their country seat, Charles Prince of Wales and his companion, the Duke of Buckingham. And there are good grounds for believing that it was there that the Prnce saw the deaf mutes who had been taught by Pedro Ponce to speak. Sir K. Digby tells us that one of the mutes, Don Pedro Velasco, 'spoke and wrote Latin as well as his mother tongue.'

"In 1628 the Count of Chinchon was appointed Viceroy of Peru, and in 1629 made his public entry into Lima. During his viceroyalty he had the sources of the Amazon explored, he suppressed the revolt of the natives and reformed the conditions under which they lived.

"In 1636 an Indian of Malacotes made Don Francisco Lopez de Cañizares, Corregidor of Lima, acquainted with the properties of quinquina bark, and two years afterwards, when the Countess of Chinchon was suffering from tertian fever, the Corregidor sent her a supply of the native remedy. The medicine was administered by the Court physician, Don Juan de Vegt, and the Countess recovered. On the return of the Count and Countess to Spain in 1640 they were accompanied by their physician, Don Juan de Vega, who brought with him a supply of the valuable bark, which he disposed of under the name of the 'Countess's powder.'"

[Note: The error was Linné's: etymologically the name should be Chinchona.—Ed.]

Correspondence

REGISTRATION OF NURSES IN MASSACHUSETTS.

Boston, Mass., February 5, 1915.

Mr. Editor: Your contention in your editorial criticism of the Bill to amend the requirements for nursing in Massachusetts, seems to be first, an endorsement of the report of the Committee appointed by the New York State Medical Society, and second, that conditions in Massachusetts are satisfactory as they are, and do not call for any change.

Allow me to say that your quoted excerpt from the New York Committee report is simply an endorsement of the work done by the small hospitals in training nurses.

The Massachusetts Board of Registration of Nurses is in sympathy with that statement, and nowhere in this proposed amendment can there be found any expression, direct or implied, which shows criticism of, or antagonism to, the work of small hospital training schools, or the graduates of such schools.

If any one reads into the proposed amendment to the law anything of this sort, it must be the result of prejudice or suspicion.

Further, where you use the words "must get along without trained nursing when sick," and again, when you state that, "Perhaps in the future the nursing profession may provide trained services for all the people for good pay, for small pay, or for no pay at all, just as now the medical profession furnishes skilled care to all the sick," you seem to convey the impression that this proposed amendment will interfere with the practical, or experienced, or the community nurse, who has gradually become useful through her adaptation to the demands of the sick, under the instruction of the physician in charge.

Again, you misinterpret the purpose of this Bill:

The Bill only aims at registration of all nurses in Massachusetts who are useful up to their capacity. The only hardship imposed is the very small amount of time and expense involved. Under this Bill, if enacted into law, every nurse who applied, and was vouched for by a reputable physician, and such other people as might be determined on, would become registered if she showed ordinary intelligence.

The purpose of this Bill is to make it possible to keep some people from being registered, or to take away the right to act as a nurse if a person should demonstrate unworthiness.

For example, a nurse might be convicted of theft. Do you contend that she should be allowed to continue as a nurse? A nurse allowed a patient to develop an exfoliating dermatitis of the whole back and thighs through improper care and neglect. Should she be allowed to repeat this?

A nurse infected a member of a family with the gonococcus. Would you want her to repeat that process?

Nurses have aided and abetted abortionists. Should these people be let alone?

Under our present law, any nurse may do anything from gross carelessness to the most advanced criminality, and so long as she is out of jail she can continue her work.

But you say the the responsibility rests with the physician. Families often select their own nurses, for personal or financial consideration, and the doctor acquiesces unless he knows of some reason to the contrary.

Do you want each doctor to find out for himself that a nurse is incompetent and should not occupy this position of trust? Assume that a nurse loses the confidence of the people in one community, there is nothing to prevent her going to another city and starting all over again.

I agree with those who say that these illustrations are not common. I fully appreciate the faithful work

and high ethical sense of the great majority of nurses, but there are exceptions. If we eliminate the few unworthy ones, there will be more confidence in this profession.

Before dealing with this matter relating to the registration of nurses, it would seem that there are more weighty questions which should receive at least equal consideration, such as attacks which are being made upon medical practice in some of the Bills which you have not seen fit, as yet, to make note of in your editorial column. Would it not be well to devote an equal space to some of the following Bills:

Providing for the registration of chiropractors.

Providing for the registration, without examination, of physicians from without the state, and for a less fee than is required of our own physicians.

Providing for the registration of those who treat by the use of herbs. This Bill is introduced with the intent to provide for the registration of a certain person, and is, therefore, class legislation.

Again you say, "That the Board of Registration of Nurses should have supervision over the training school for nurses is a debatable point and does not correspond with the practise in the case of the Board of Registration in Medicine and the medical schools."

Permit me to call your attention to the fact that no medical school can legally confer a degree upon its graduates unless authorized by the Legislature so to do, but there is nothing to prevent any training school from conferring diplomas upon its graduates, and a well-known correspondence school does so confer them.

The proprietor of a pseudo-medical institution in this city, was recently convicted and fined for granting degrees without being authorized by the state so to do.

I would very much like to have you call attention to any other features of this Bill which you do not approve of.

Respectfully,
WALTER P. BOWERS, M.D.

A MISREPRESENTATION CORRECTED.

BOSTON, MASS., February 4, 1915.

Mr. Editor: In the February number of *McClure's* magazine, I am quoted in an article by R. H. Schauffler as backing Bernard Shaw's charges against the medical profession, except his attitude on animal experimentation. Shaw's attack is summarized in his own words, including the following sentence: "Most doctors have no honor and no conscience." Other sentences in Shaw's habitual exaggerative style follow and my approval of them all is assumed. The facts of the matter are as follows:

In the *Survey* of June 3, 1911, I wrote, at the request of that magazine, a review of Shaw's play entitled, "The Doctor's Dilemna," and said that as regards "Mr. Shaw's principal theses and in the main, I find myself heartily in agreement with him." I did not suppose that anyone would take Shaw seriously enough as to suppose that a ridiculous calumny, such as the statement that "most doctors have no honor and no conscience" would be regarded as a significant or an important remark. It should go without saying that I have no sympathy with such a statement, as I believe the medical profession to be as honorable and conscientious a body of men as any in the country. In the article on which Mr. Schauffler's misstatement of my position is founded, I summed up what in my opinion were the just offences of our profession, offences, which we all recognize and deplore. I specified such shortcomings as these,—that we do not tell patients with sufficient vigor the truth about their habits and their own responsibility for disease; that we sometimes foster cases of imaginary illness; that we sometimes perform unnecessary operations; that feesplitting and other abuses are widespread. No one, I suppose, will doubt these facts and no one will have much doubt that they will continue as long as the doctors of the country are as miserably poor as at present. So long as the economic status of the doctor is what it is, we cannot look for much improvement in that direction.

This was Shaw's belief about the whole matter and it is mine. It is not a question of blaming anybody but of getting something done. That "something" is to diminish the number of doctors by the raising of the standards of examining boards for the license to practise medicine. This is what the medical profession can do, of itself, and do immediately. It cannot, of itself, carry out the other greatly-needed reform which I believe is coming through the more intelligent activity of hospital trustees, namely, the payment of hospital physicians for full time work and the selection of these physicians by methods that exclude favoritism and the methods of the close corporation.

I should add that I understand perfectly Mr. Schauffler's unintentional mistake in the statement of my position. He is a man for whom I have the greatest admiration and I am sure he would not willingly misrepresent anyone.

Yours sincerely,
RICHARD C. CABOT, M.D.

INFORMATION ABOUT DR. SMILIE.

BOSTON MEDICAL LIBRARY, Feb. 9, 1915.

Mr. Editor: Dr. Elton Romeo Smilie about whom inquiry was made by your correspondent in last week's issue of the JOURNAL, received the degree of M.D. in 1845 from the Castleton Medical College, Castleton, Vt. He apparently settled for a time in Boston, but in 1849 he removed to San Francisco. He was dropped from The Massachusetts Medical Society in 1846 with many others who had removed from the state. In 1886, according to Polk, he was living at 649 Washington Street, San Francisco. No later record of him has been found.

Very truly yours,
"ASSISTANT."

THE ROENTGEN DIAGNOSIS OF PULMONARY TUBERCULOSIS.

PROVIDENCE, R. I., Feb. 2, 1915.

Mr. Editor: In the JOURNAL for Jan. 28, 1915, there appears a review of "Progress in Tuberculosis," by Dr. J. B. Hawes, 2d, and Dr. P. C. Bartlett. In this paper several statements are made regarding the present status of the Roentgen diagnosis of pulmonary tuberculosis, which I do not believe it is fair to allow to stand uncorrected. One would infer from this report that the Roentgen rays have their greatest field of usefulness in the diagnosis of tuberculosis in infancy and childhood; and that, with regard to the early diagnosis in adults, they furnish merely a useful adjunct, much inferior to the other clinical methods of investigation. This is practically the same idea as is expressed in the very few scant paragraphs devoted to this subject in the recent booklet, by Hawes on "Early Pulmonary Tuberculosis."

As a matter of fact, the real situation is just the reverse. With children, the Roentgen examination usually furnishes merely helpful evidence, whereas with adults the Roentgen rays can establish definitely the presence or absence of pulmonary tuberculosis.

In infancy and childhood, the examination is largely limited to the discovery of enlarged tracheo-bronchial lymph-nodes. It is well-known that these glandular enlargements may be the result of non-tuberculous infections, such as measles, scarlet fever, pertussis, etc. Even if known to be tubercular, we cannot receive much help from the Roentgen rays in differentiating between *infection* and *disease*. This is the real problem involved, and, with respect to this, the clinical aspects of the case are the most important ones.

Of course at times other tuberculous processes may

be discovered in the Roentgen examination of children's lungs, but the above are the most important findings. Indeed the entire matter of diagnosis of tuberculosis in children is far from satisfactory, and the Roentgen evidence is not yet standardized.

With adults, however, the situation is quite different. It is here that the Roentgen examination has its most valuable applications.

The physical conditions present in the pulmonary region are peculiarly suitable to the early detection of pathological processes by the Roentgen rays. The Roentgen plate is merely a record of differences in density of the various tissues through which the rays pass. The greater the difference in density between adjacent structures, the more striking will be their differentiation upon the sensitive plate. In the gaseous content of the pulmonary alveoli we have a medium which allows the Roentgen rays to pass through with only the very slightest amount of absorption. Against this background of practically no resistance, pathological processes of very minute size stand out with a sufficient degree of differentiation to be recorded definitely upon the plate. We can thus show the tubercles along definite paths of invasion. Of course lesions of purely microscopic size cannot be differentiated. But clinically we are only concerned with lesions which have already gone somewhat beyond this stage.

It is thus possible to detect an area of tuberculous infiltration not large enough to furnish any definite changes with percussion or auscultation, even though employed by the most expert. Everyone must admit that there are threshold limits to the data obtainable by the usual clinical methods. Fortunately, however, the physical conditions which I have outlined above permit the threshold of differentiation by the Roentgen rays to be much earlier.

These same principles apply, it is true, to children, but the difference in the pathological processes found in children renders the evidence less valuable than in adults.

These claims are not merely the "words of enthusiasts." They are the matured and calm conclusions of many able and conservative investigators, scattered throughout the world. It is of course true that this extremely early diagnosis cannot be made by superficial or careless Roentgen methods. It requires the use of the fluoroscope, several plates taken very carefully both in the antero-posterior and postero-anterior positions, especially the use of stereoscopic plates, and finally an extremely careful and conscientious study of these plates. When these methods have been carefully carried out it is not boasting to state that tuberculous lesions can be detected where the physical signs may be entirely lacking.

The clinical diagnosis of pulmonary tuberculosis based purely upon history and constitutional reaction may be correct in some cases, but it also frequently leads to the unnecessary treatment and segregation of non-tuberculous patients, including those suffering from syphilis, hyperthyroidism, etc. With such cases, a negative Roentgen examination, when the above-mentioned methods have been carried out, can easily separate them out. This negative phase of Roentgen diagnosis is just as important as its positive aspect. The Roentgen method today furnishes the only *safe* method of eliminating absolutely the possibility of pulmonary tuberculosis in the adult.

The statement that "in border-line cases the Roentgen rays cannot determine the activity of a tuberculous process" does not give a fair idea of the facts. This statement may be true in some few cases of extensiv. tuberculosis, where there is a mixture of old healed processes and fresher ones. Here the clinical data are of extreme importance. This problem however has no place in the *early* diagnosis of tuberculosis. Here we wish to know definitely whether there is a tuberculous process present or not. With the Roentgen method, in competent hands, this problem can be solved.

I have dwelt thus at length upon this subject as I do not think it is fair, in what purports to be a Review of Progress, to thus sweep aside, with a wave of the hand, valuable investigations that have added so much to our present diagnostic armament.

It is perhaps possible that the review represents merely the opinions of the authors, based upon their own personal experience. In that case, all I can say is that they have indeed been unfortunate in their choice of Roentgenologist.

Very truly yours,

ISAAC GERBER, M.D.

RECREATION FOR MEN IN SANITARIA.

BOSTON, Harvard Hotel, Feb. 3, 1915.

Mr. Editor:

In most sanitaria, men, unless very ill or very aged, have an unnecessarily stupid time, which helps morbid introspection. Women are content to sit in their rooms, read and sew. Every well-conducted sanitarium should have first, a separate recreation room for men, with magazines and games, where they can get away from the women, especially in the morning. There ought to be within easy reach light gymnastic apparatus and a shower bath for use in the morning. Secondly, it should have a billiard table, preferably of the large English type. Third, there should be a workshop with desks, stock, tools, a lathe and possibly an instructor—men who teach sloyd can be hired at a nominal salary.

If a man is confined to the house by a three days' storm, he suffers from want of exercise, and the billiard table and workshop would help very much. The writer believes that passive exercise cannot take the place of active exercise, and he thinks the professional entertainer, not Harry Lauder, but women who recite character sketches, are very tiresome.

Yours very truly,

EDWARD L. PARKS, M.D.

BELGIAN PHYSICIANS' RELIEF FUND.

REPORT OF THE TREASURER OF THE COMMITTEE OF AMERICAN PHYSICIANS FOR THE AID OF THE BELGIAN PROFESSION FOR THE WEEK ENDING FEBRUARY 6, 1915.

Dr. Lewis S. McMurtry of Louisville, Ky., and Dr. Charles A. L. Reed of Cincinnati, Ohio, have consented to become members of the Committee of American Physicians for the Aid of the Belgian Profession.

At the request of the Treasurer, the Executive Committee has arranged to have the accounts audited quarterly. The first audit will be made about the twentieth of March.

CONTRIBUTIONS.

Dr. Willard Barlett	St. Louis, Mo	$ 10.00
Dr. M. Manges	New York, N. Y.	15.00
Dr. G. D. Hale, P. A. Surg. U. S. N.	San Francisco, Cal.	10.00
Dr. Alfred Wiener	New York, N. Y.	10.00
Dr. John Woodman	New York, N. Y.	5.00
Dr. Robert T. Frank	New York, N. Y.	10.00
Cash—B	Pittsburgh, Pa.	10.00
Dr. R. O. Raymond	Flagstaff, Ariz.	10.00
Dr. A. Hymanson	New York, N. Y.	5.00
Dr. Mazyck P. Ravenel	Columbia, Mo.	15.00
Oklahoma State Med. Asso.	Muskogee, Okla.	100.00
Dr. H. H. Sherk	Pasadena, Cal.	25.00
Dr. Charles Lee King	Pasadena, Cal.	20.00
Dr. James Williamson	Philadelphia, Pa.	5.00
Dr. J. S. Kauffman	Blue Island, Ill,	5.00
Dr. John P. Treanor	Dorchester, Mass.	10.00
The Clinical Club of Albany	Albany, N. Y.	25.00

Dr. Thomas J. Watkins.	Chicago, Ill	50.00
Dr. H. E. Oesterling	Wheeling, W. Va.	10.00
Dr. Leslie W. Schwab	Chicago, Ill.	2.00
Dr. A. Howard Smith	Marietta, Ohio	5.00
Dr. Woodson H. Taulbee	Maysville, Ky.	5.00
Total		$ 362.00
Previously reported receipts		$2,166.00
Grand Total		$2,528.00
Previously reported disbursements		$2,090.00
Disbursements week ending Feb. 6		440.00
Total disbursements		$2,530.00
Deficit		$ 2.00

F. F. SIMPSON, M.D., *Treasurer.*

NOTICES.

Physicians visiting the city will be cordially welcomed at the following clinics on the days and hours specified.

BOSTON CITY HOSPITAL.—After January 1, 1915, public operations will be performed in the Surgical Amphitheatre each week, on Thursdays, Fridays and Saturdays, at 10 o'clock.

Thursday: First Surgical Service. Dr. Blake.
Friday. Third Surgical Service. Dr. Nichols, and Fourth Surgical (G-U) Service, Dr. Thorndike.
Saturday: Second Surgical Service. Dr. Lund.

CARNEY HOSPITAL.—Dr. Bottomley and Dr. Mahoney will hold an operative surgical clinic every Wednesday at 9 A.M., and at the same hour on the same day Dr. W. R. MacAusland will hold an orthopedic clinic. All physicians are welcome to attend.

MASSACHUSETTS GENERAL HOSPITAL.—1. A surgical clinic Tuesday, at 12, in the out-patient amphitheatre. 2. Operations in the Bigelow amphitheatre Saturdays from 10 to 1. 3. Operations in the Surgical Building except Sunday, from 9 to 1. 4. Daily surgical ward visits at which visiting physicians will be welcome. 5. Clinic in medicine and pathology Tuesdays at 12, by Drs. R. C. and H. Cabot and O. Richardson. 6. Medical clinic Thursday at 12, by Dr. D. L. Edsall.

PETER BENT BRIGHAM HOSPITAL.—Physicians visiting the city will always be cordially welcomed at the Peter Bent Brigham Hospital.

The medical visit takes place regularly every morning beginning at 10 o'clock.

Operations are usually going on throughout the forenoon in the surgical amphitheatre.

The surgical clinic is held in the clinical amphitheatre on Wednesdays at 12.30 P.M.

The medical clinic is held in the clinical amphitheatre on Mondays at 12.30 P.M.

The clinico-pathological demonstration is held in the clinical amphitheatre on Fridays at 3.30 P.M.

SOCIETY NOTICES.

NEW ENGLAND PEDIATRIC SOCIETY.—The thirty-sixth meeting of the New England Pediatric Society will be held in the Boston Medical Library, Friday, February 26, 1915, at 8.15 P.M.

1. "Typhoid Fever in Children," Dr. Karlton G. Percy, Boston.
2. "Homogenised Milk. Its Possible Uses in Infant Feeding," Dr. Maynard Ladd, Boston.
3. "Luetic Bursopathy of Verneuil. Report of a Case. Congenital Type," Dr. William P. Coues, Boston.
4. "Some New Symptoms in Amaurotic Family Idiocy," Dr. Isador E. Coriat, Boston.

Light refreshments will be served after the meeting.

E. M. BUCKINGHAM, M.D., *Pres.*
RICHARD M. SMITH, M.D., *Sec'y.*

THE HARVEY SOCIETY.—The ninth lecture of the series will be given at the New York Academy of Medicine, 17 West 43rd street, on Saturday evening, February 27th, at 8.30 P.M., by Prof. R. R. Bensley, University of Chicago. Subject: "Structure and Relationships of the Islets of Langerhans and Criteria of Histological Control in Experiments on the Pancreas."

APPOINTMENTS.

ARIAL W. GEORGE, M. D., Boston, has been appointed Assistant-Professor of the Department of Roentgenology, at the Tufts College Medical School. Dr. George has also been appointed on the consulting staff of the Carney Hospital.

DR. GEORGE BURGESS MAGRATH has been reappointed medical examiner for the County of Suffolk, Mass.

CORRECTION.

In the schedule of lectures in the School for Health Officers, published in the issue of the JOURNAL for Jan. 28, Dr. Harrington's third lecture on School Hygiene should have been announced for Feb. 24.

RECENT DEATHS.

DR. WILLIAM DUGAN KELLY, of Boston, died on February 9, of septicemia, apparently acquired by infection from a patient with acute tonsillitis. He was born at Lamont, Ill., in 1880, and removed to Boston as a boy, graduated from Boston Latin School and from the Harvard Medical School, receiving the degree of M. D. in 1903. Since 1904 he had served as a school physician for the Board of Health in this city. He was a Fellow of the Massachusetts Medical Society, a member and former president of the Boston Medical Society and a member of the Boston Medical Library. He was a member of the staff of Mt. Sinai Hospital, of the Sunnyside Day Nursery and of the Milk and Baby Hygiene Clinic at the Elizabeth Peabody House. He was unmarried.

DR. AMOS HAGAR PEIRCE, a Fellow of The Massachusetts Medical Society, died at his home in West Newbury, February 9. He was a native of Lincoln, Mass., and was a graduate of the Boston University School of Medicine in 1882.

BOOKS AND PAMPHLETS RECEIVED.

The Tuberculosis Problem in Rural Communities by S. Adolphus Knopf, M. D. Reprint No. 243. Public Health Reports.

Index Catalogue Library of the Surgeon General, Second Series, Vol. 19. Washington, D. C.

Quain's Anatomy, Eleventh Edition, Vol IV, Part I. Osteology and Arthrology. Longmans, Green & Co., London.

Urinary Analysis and Diagnosis by Louis Heitzmann, M. D. William Wood & Co., 1915.

The Weekly Bulletin, Cincinnati, Jan. 30, 1915.

Impounded Water by H. R. Carter. Reprint No. 244 from Public Health Reports.

Bulletin of the State Board of Health of Maine, November, 1914.

Scarlet Fever, Its Prevention and Control by J. W. Schereschewsky. Supplement No. 21, Public Health Reports.